



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 21, 2017 – 04:51 pm GMT

PDB ID : 5LS6  
Title : Structure of Human Polycomb Repressive Complex 2 (PRC2) with inhibitor  
Authors : Zhang, Y.; Justin, N.; Chen, S.; Wilson, J.; Gamblin, S.  
Deposited on : 2016-08-22  
Resolution : 3.47 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<http://wwpdb.org/validation/2016/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467  
Mogul : 1.7.2 (RC1), CSD as538be (2017)  
Xtriage (Phenix) : 1.9-1692  
EDS : recalc29047  
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : recalc29047

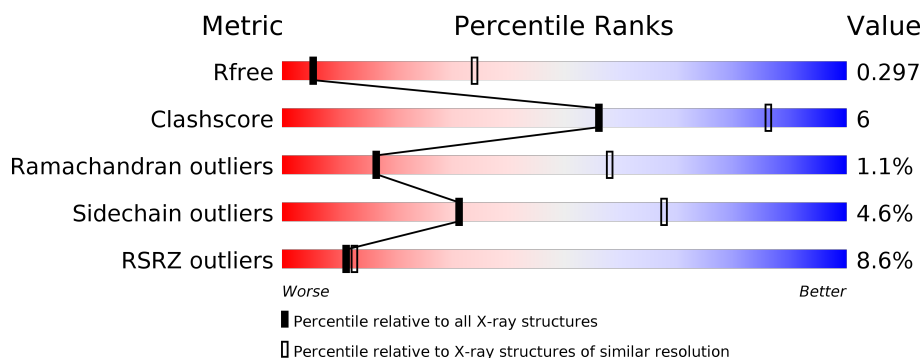
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.47 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))
$R_{free}$	100719	1049 (3.58-3.38)
Clashscore	112137	1096 (3.56-3.40)
Ramachandran outliers	110173	1063 (3.56-3.40)
Sidechain outliers	110143	1064 (3.56-3.40)
RSRZ outliers	101464	1019 (3.56-3.40)

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 on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. 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  $\leq 5\%$ . 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	695	<div> <div>11%</div> <div> <div></div> <div>69%</div> <div>12%</div> <div>•</div> <div>18%</div> </div> </div>
1	D	695	<div> <div>7%</div> <div> <div></div> <div>66%</div> <div>14%</div> <div>•</div> <div>18%</div> </div> </div>
1	G	695	<div> <div>12%</div> <div> <div></div> <div>68%</div> <div>13%</div> <div>•</div> <div>18%</div> </div> </div>
1	J	695	<div> <div>13%</div> <div> <div></div> <div>70%</div> <div>11%</div> <div>•</div> <div>18%</div> </div> </div>
2	B	367	<div> <div>4%</div> <div> <div></div> <div>79%</div> <div>19%</div> <div>••</div> </div> </div>
2	E	367	<div> <div>%</div> <div> <div></div> <div>78%</div> <div>20%</div> <div>••</div> </div> </div>

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Mol	Chain	Length	Quality of chain
2	H	367	
2	K	367	
3	C	129	
3	F	129	
3	I	129	
3	L	129	
4	Q	11	
4	R	11	
4	S	11	
4	T	11	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	ZN	A	801	-	-	X	-
5	ZN	G	806	-	-	X	-
5	ZN	J	806	-	-	X	-

## 2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 34891 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 Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	570	Total	C	N	O	S	0	0	0
			4588	2878	813	855	42			
1	D	570	Total	C	N	O	S	0	0	0
			4588	2878	813	855	42			
1	G	572	Total	C	N	O	S	0	0	0
			4603	2886	816	859	42			
1	J	570	Total	C	N	O	S	0	0	0
			4588	2878	813	855	42			

There are 52 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-9	GLU	-	expression tag	UNP Q15910
A	-8	THR	-	expression tag	UNP Q15910
A	-7	SER	-	expression tag	UNP Q15910
A	-6	LEU	-	expression tag	UNP Q15910
A	-5	ALA	-	expression tag	UNP Q15910
A	-4	GLU	-	expression tag	UNP Q15910
A	-3	GLU	-	expression tag	UNP Q15910
A	-2	LYS	-	expression tag	UNP Q15910
A	-1	LEU	-	expression tag	UNP Q15910
A	0	THR	-	expression tag	UNP Q15910
A	249	GLN	GLU	conflict	UNP Q15910
A	419	PRO	-	linker	UNP Q15910
A	420	GLY	-	linker	UNP Q15910
D	-9	GLU	-	expression tag	UNP Q15910
D	-8	THR	-	expression tag	UNP Q15910
D	-7	SER	-	expression tag	UNP Q15910
D	-6	LEU	-	expression tag	UNP Q15910
D	-5	ALA	-	expression tag	UNP Q15910
D	-4	GLU	-	expression tag	UNP Q15910
D	-3	GLU	-	expression tag	UNP Q15910

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-2	LYS	-	expression tag	UNP Q15910
D	-1	LEU	-	expression tag	UNP Q15910
D	0	THR	-	expression tag	UNP Q15910
D	249	GLN	GLU	conflict	UNP Q15910
D	419	PRO	-	linker	UNP Q15910
D	420	GLY	-	linker	UNP Q15910
G	-9	GLU	-	expression tag	UNP Q15910
G	-8	THR	-	expression tag	UNP Q15910
G	-7	SER	-	expression tag	UNP Q15910
G	-6	LEU	-	expression tag	UNP Q15910
G	-5	ALA	-	expression tag	UNP Q15910
G	-4	GLU	-	expression tag	UNP Q15910
G	-3	GLU	-	expression tag	UNP Q15910
G	-2	LYS	-	expression tag	UNP Q15910
G	-1	LEU	-	expression tag	UNP Q15910
G	0	THR	-	expression tag	UNP Q15910
G	249	GLN	GLU	conflict	UNP Q15910
G	419	PRO	-	linker	UNP Q15910
G	420	GLY	-	linker	UNP Q15910
J	-9	GLU	-	expression tag	UNP Q15910
J	-8	THR	-	expression tag	UNP Q15910
J	-7	SER	-	expression tag	UNP Q15910
J	-6	LEU	-	expression tag	UNP Q15910
J	-5	ALA	-	expression tag	UNP Q15910
J	-4	GLU	-	expression tag	UNP Q15910
J	-3	GLU	-	expression tag	UNP Q15910
J	-2	LYS	-	expression tag	UNP Q15910
J	-1	LEU	-	expression tag	UNP Q15910
J	0	THR	-	expression tag	UNP Q15910
J	249	GLN	GLU	conflict	UNP Q15910
J	419	PRO	-	linker	UNP Q15910
J	420	GLY	-	linker	UNP Q15910

- Molecule 2 is a protein called Polycomb protein EED.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	365	Total	C	N	O	S	0	0	0
			2959	1873	521	543	22			
2	E	365	Total	C	N	O	S	0	0	0
			2959	1873	521	543	22			
2	H	365	Total	C	N	O	S	0	0	0
			2959	1873	521	543	22			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	K	365	Total	C	N	O	S	0	0	0
			2959	1873	521	543	22			

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	75	GLY	-	expression tag	UNP O75530
B	76	SER	-	expression tag	UNP O75530
E	75	GLY	-	expression tag	UNP O75530
E	76	SER	-	expression tag	UNP O75530
H	75	GLY	-	expression tag	UNP O75530
H	76	SER	-	expression tag	UNP O75530
K	75	GLY	-	expression tag	UNP O75530
K	76	SER	-	expression tag	UNP O75530

- Molecule 3 is a protein called Polycomb protein SUZ12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	125	Total	C	N	O	S	0	0	0
			1042	657	180	193	12			
3	F	125	Total	C	N	O	S	0	0	0
			1042	657	180	193	12			
3	I	125	Total	C	N	O	S	0	0	0
			1042	657	180	193	12			
3	L	125	Total	C	N	O	S	0	0	0
			1042	657	180	193	12			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	557	GLY	-	expression tag	UNP Q15022
F	557	GLY	-	expression tag	UNP Q15022
I	557	GLY	-	expression tag	UNP Q15022
L	557	GLY	-	expression tag	UNP Q15022

- Molecule 4 is a protein called Jarid2 K116me3.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	Q	10	Total	C	N	O	0	0	0
			85	54	17	14			
4	R	10	Total	C	N	O	0	0	0
			85	54	17	14			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	S	10	Total 85	C 54	N 17	O 14	0	0	0
4	T	10	Total 85	C 54	N 17	O 14	0	0	0

- | Mol | Chain | Residues | Atoms           | ZeroOcc | AltConf |
|-----|-------|----------|-----------------|---------|---------|
| 5   | G     | 8        | Total Zn<br>8 8 | 0       | 0       |
| 5   | J     | 8        | Total Zn<br>8 8 | 0       | 0       |
| 5   | A     | 8        | Total Zn<br>8 8 | 0       | 0       |
| 5   | D     | 8        | Total Zn<br>8 8 | 0       | 0       |

- # 74D
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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	A	1	Total 37	C 28	F 2	N 4	O 3	0	0
6	D	1	Total 37	C 28	F 2	N 4	O 3	0	0



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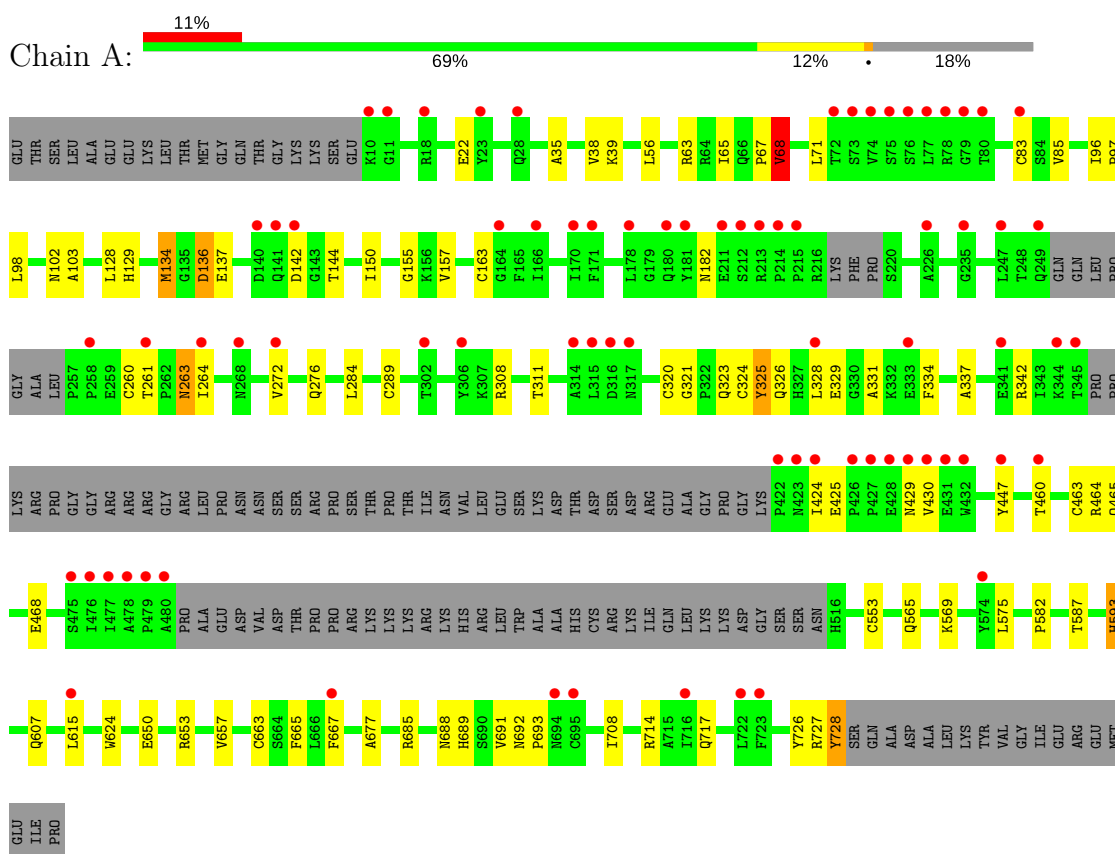
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	G	1	Total	C	F	N	O	0	0
			37	28	2	4	3		
6	J	1	Total	C	F	N	O	0	0
			37	28	2	4	3		



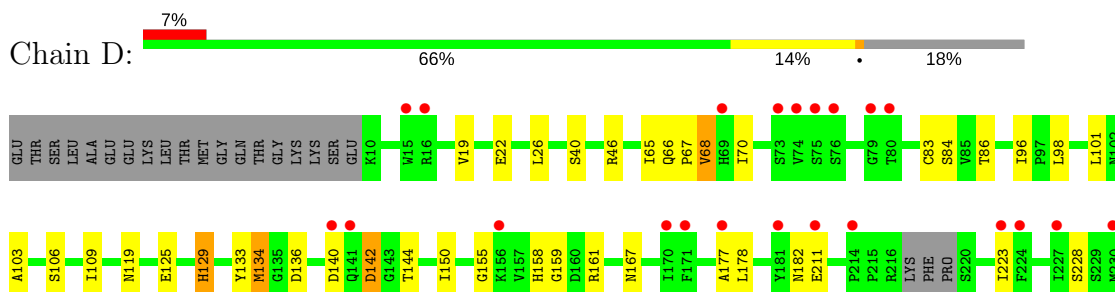
### 3 Residue-property plots

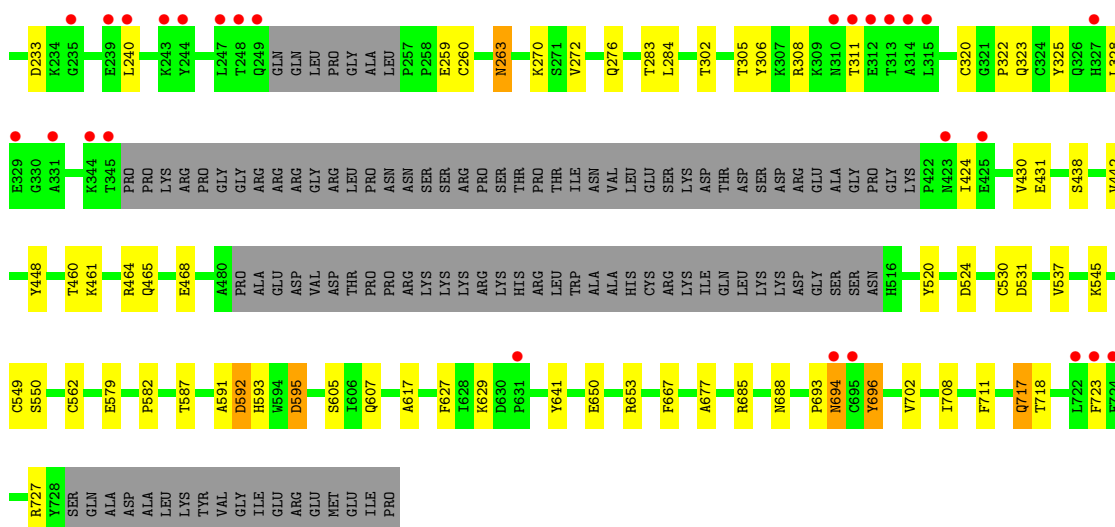
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are 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: Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2

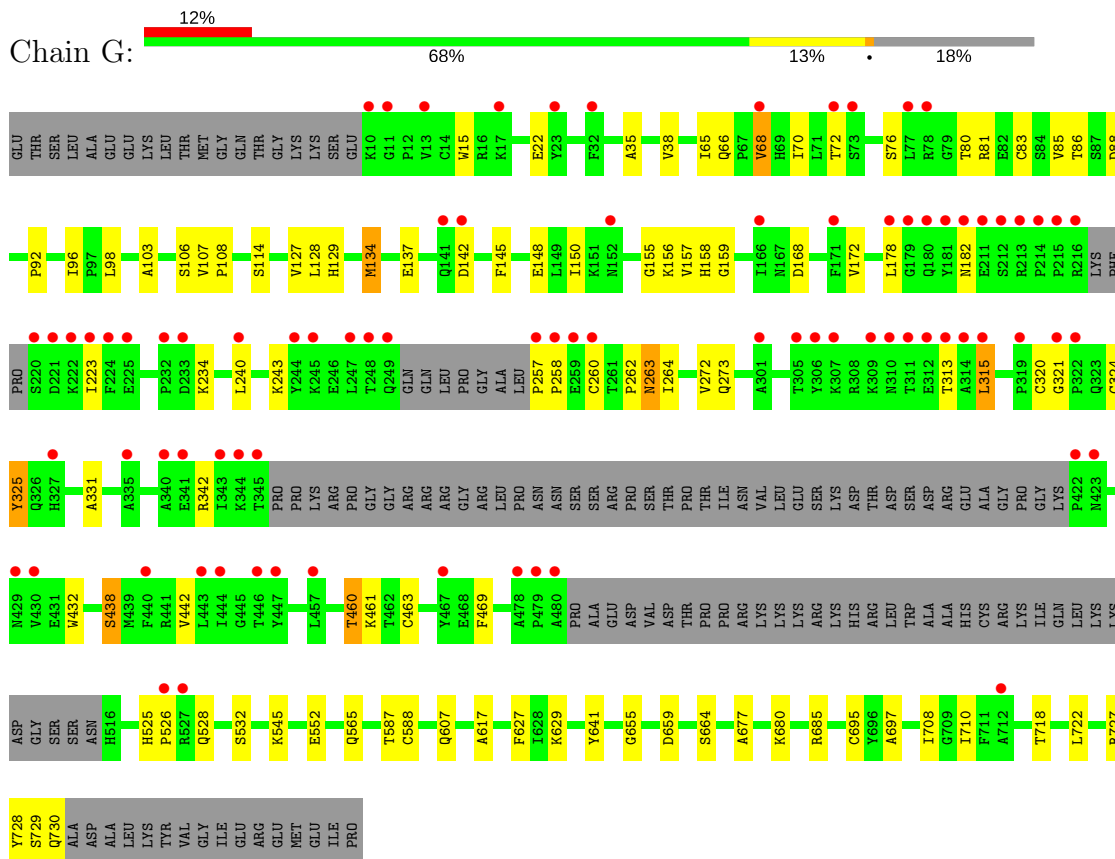


- Molecule 1: Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2





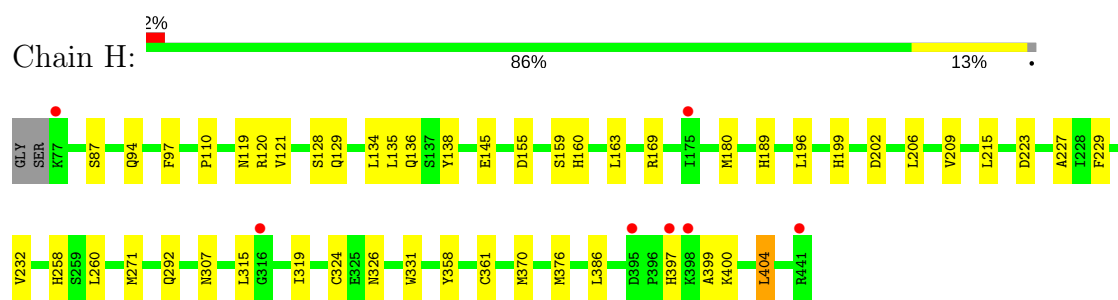
- Molecule 1: Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2



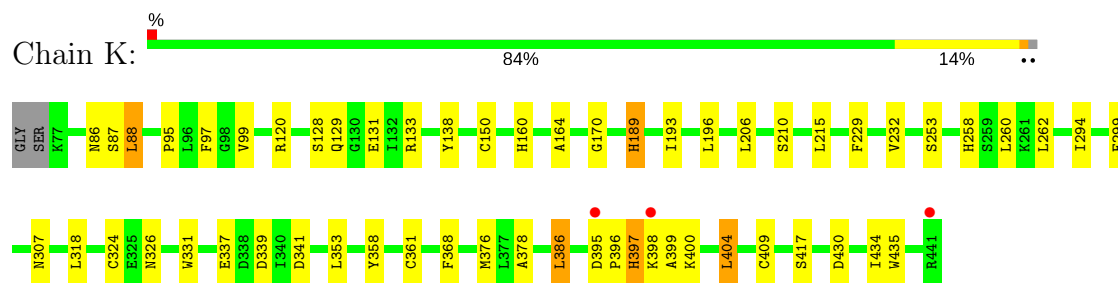
- Molecule 1: Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2,Histone-lysine N-methyltransferase EZH2



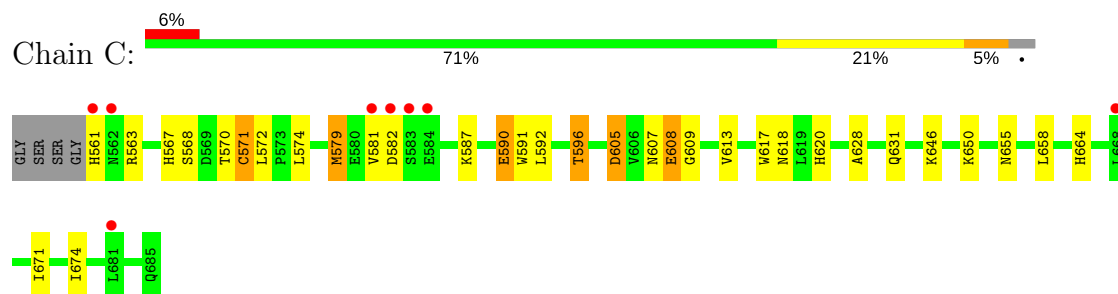




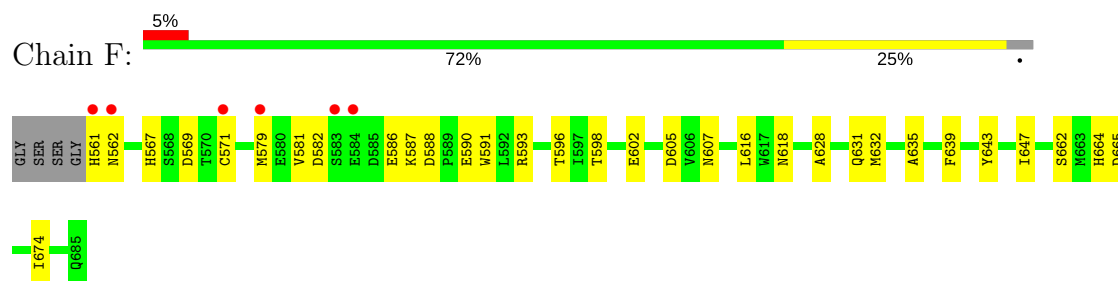
- Molecule 2: Polycomb protein EED



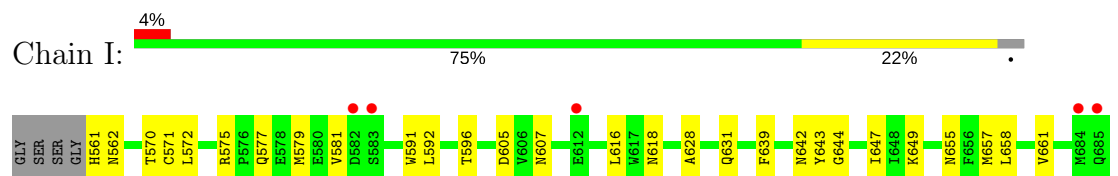
- Molecule 3: Polycomb protein SUZ12



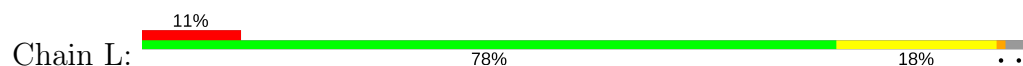
- Molecule 3: Polycomb protein SUZ12

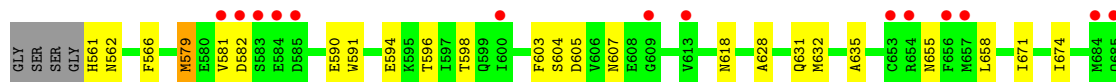


- Molecule 3: Polycomb protein SUZ12



- Molecule 3: Polycomb protein SUZ12





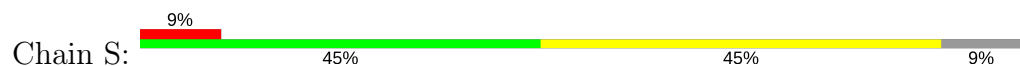
• Molecule 4: Jarid2 K116me3



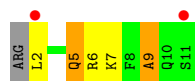
• Molecule 4: Jarid2 K116me3



• Molecule 4: Jarid2 K116me3



• Molecule 4: Jarid2 K116me3



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	131.31Å 170.27Å 275.54Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	68.84 – 3.47 68.84 – 3.47	Depositor EDS
% Data completeness (in resolution range)	99.9 (68.84-3.47) 99.9 (68.84-3.47)	Depositor EDS
$R_{merge}$	0.30	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.92 (at 3.49Å)	Xtriage
Refinement program	REFMAC 5.8.0135	Depositor
R, $R_{free}$	0.229 , 0.299 0.231 , 0.297	Depositor DCC
$R_{free}$ test set	3952 reflections (5.16%)	DCC
Wilson B-factor (Å <sup>2</sup> )	78.0	Xtriage
Anisotropy	0.722	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.31 , 56.0	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.42$ , $\langle L^2 \rangle = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	34891	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	105.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 34.62 % of the origin peak, indicating pseudo translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo translational symmetry is equal to 6.6281e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

<sup>1</sup> Intensities estimated from amplitudes.

<sup>2</sup> Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  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](#)

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, M3L, 74D

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	0.50	0/4691	0.74	0/6327
1	D	0.51	0/4691	0.74	0/6327
1	G	0.51	0/4706	0.76	2/6347 (0.0%)
1	J	0.53	1/4691 (0.0%)	0.75	0/6327
2	B	0.52	0/3034	0.76	0/4107
2	E	0.50	0/3034	0.76	0/4107
2	H	0.52	0/3034	0.78	0/4107
2	K	0.50	0/3034	0.77	0/4107
3	C	0.51	0/1063	0.79	2/1427 (0.1%)
3	F	0.49	0/1063	0.77	0/1427
3	I	0.46	0/1063	0.77	0/1427
3	L	0.50	0/1063	0.77	0/1427
4	Q	0.65	0/73	1.05	0/96
4	R	0.70	0/73	0.73	0/96
4	S	0.66	0/73	1.02	0/96
4	T	0.75	0/73	1.10	0/96
All	All	0.51	1/35459 (0.0%)	0.76	4/47848 (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	A	0	3
1	D	0	3
1	G	0	2
1	J	0	2
3	C	0	3
3	F	0	1
3	L	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
All	All	0	16

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	J	182	ASN	C-O	5.38	1.33	1.23

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	685	ARG	NE-CZ-NH2	5.97	123.29	120.30
1	G	315	LEU	CA-CB-CG	5.97	129.02	115.30
3	C	563	ARG	NE-CZ-NH1	5.20	122.90	120.30
3	C	608	GLU	N-CA-C	5.11	124.80	111.00

There are no chirality outliers.

All (16) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	134	MET	Peptide
1	A	311	THR	Peptide
1	A	326	GLN	Peptide
3	C	561	HIS	Peptide
3	C	579	MET	Peptide
3	C	587	LYS	Peptide
1	D	134	MET	Peptide
1	D	595	ASP	Peptide
1	D	67	PRO	Peptide
3	F	579	MET	Peptide
1	G	134	MET	Peptide
1	G	525	HIS	Peptide
1	J	134	MET	Peptide
1	J	525	HIS	Peptide
3	L	579	MET	Peptide
3	L	603	PHE	Peptide

## 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	4588	0	4445	74	0
1	D	4588	0	4442	55	0
1	G	4603	0	4457	51	0
1	J	4588	0	4447	37	0
2	B	2959	0	2881	49	0
2	E	2959	0	2881	44	0
2	H	2959	0	2881	30	0
2	K	2959	0	2881	34	0
3	C	1042	0	1021	22	0
3	F	1042	0	1021	20	0
3	I	1042	0	1021	17	0
3	L	1042	0	1021	17	0
4	Q	85	0	90	6	0
4	R	85	0	90	3	0
4	S	85	0	90	5	0
4	T	85	0	90	5	0
5	A	8	0	0	2	0
5	D	8	0	0	0	0
5	G	8	0	0	3	0
5	J	8	0	0	2	0
6	A	37	0	0	4	0
6	D	37	0	0	0	0
6	G	37	0	0	0	0
6	J	37	0	0	0	0
All	All	34891	0	33759	401	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.

All (401) 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:667:PHE:CD2	1:A:708:ILE:HD12	1.39	1.55
1:A:667:PHE:CD2	1:A:708:ILE:CD1	2.00	1.41
1:A:667:PHE:CE2	1:A:708:ILE:CD1	2.07	1.36
1:A:667:PHE:CE2	1:A:708:ILE:HD13	1.72	1.22
1:A:667:PHE:CE2	1:A:708:ILE:HD12	1.76	1.12
1:A:667:PHE:HD2	1:A:708:ILE:CD1	1.53	1.05
1:A:667:PHE:HE2	1:A:708:ILE:HD13	1.02	1.04
1:G:463:CYS:HG	5:G:802:ZN:ZN	0.66	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:588:CYS:SG	5:J:806:ZN:ZN	1.51	0.97
1:G:588:CYS:HG	5:G:806:ZN:ZN	0.61	0.91
1:A:667:PHE:CD2	1:A:708:ILE:HD11	2.11	0.86
1:A:665:PHE:CZ	6:A:809:74D:CAJ	2.59	0.85
1:A:667:PHE:HE2	1:A:708:ILE:CD1	1.68	0.84
1:G:234:LYS:HB3	1:G:240:LEU:HD21	1.58	0.83
1:A:667:PHE:HD2	1:A:708:ILE:HD12	1.00	0.79
1:J:588:CYS:HG	5:J:806:ZN:ZN	0.89	0.79
2:E:232:VAL:HG21	3:F:591:TRP:CE3	2.20	0.77
1:G:697:ALA:HB3	1:G:728:TYR:OH	1.86	0.75
2:H:324:CYS:SG	4:S:5:GLN:NE2	2.60	0.74
1:A:289:CYS:SG	5:A:801:ZN:ZN	1.75	0.74
1:G:263:ASN:HA	3:I:607:ASN:HD21	1.54	0.73
1:A:689:HIS:HB2	1:A:726:TYR:CE1	2.24	0.73
1:D:430:VAL:HG21	1:D:465:GLN:HE21	1.54	0.72
1:D:150:ILE:HG22	1:D:155:GLY:HA2	1.71	0.71
1:A:150:ILE:HG22	1:A:155:GLY:HA2	1.72	0.70
2:K:326:ASN:HA	2:K:358:TYR:CE1	2.26	0.70
2:H:326:ASN:HA	2:H:358:TYR:CE1	2.26	0.70
1:A:667:PHE:HD2	1:A:708:ILE:HD11	1.50	0.70
2:B:125:GLU:HB2	2:B:135:LEU:HD11	1.73	0.69
1:G:588:CYS:SG	5:G:806:ZN:ZN	1.77	0.69
4:Q:9:ALA:HB1	4:Q:10:GLN:HB2	1.74	0.68
1:A:67:PRO:O	1:A:68:VAL:HG12	1.94	0.68
1:A:68:VAL:HG11	2:B:110:PRO:CG	2.23	0.68
1:D:328:LEU:HD23	1:D:424:ILE:HG23	1.76	0.68
2:E:170:GLY:HA2	2:E:193:ILE:HD12	1.75	0.67
1:G:697:ALA:HB2	1:G:710:ILE:HD13	1.77	0.66
1:A:263:ASN:HA	3:C:607:ASN:HD21	1.61	0.66
2:B:208:SER:HG	2:B:218:TRP:HE1	1.43	0.66
1:D:263:ASN:HA	3:F:607:ASN:HD21	1.60	0.64
1:D:272:VAL:HG12	1:D:276:GLN:HB2	1.79	0.64
2:K:258:HIS:CE1	2:K:307:ASN:HA	2.32	0.64
1:A:650:GLU:OE1	1:A:653:ARG:NH1	2.31	0.64
1:D:617:ALA:HB3	1:D:627:PHE:CE1	2.33	0.64
2:E:326:ASN:HA	2:E:358:TYR:CE1	2.35	0.62
1:A:63:ARG:HB3	1:A:65:ILE:HD11	1.82	0.61
1:D:650:GLU:OE1	1:D:653:ARG:NH1	2.34	0.61
1:D:83:CYS:HB2	1:D:98:LEU:HD13	1.83	0.61
1:D:464:ARG:NH1	1:D:468:GLU:OE2	2.34	0.60
1:A:665:PHE:CE2	6:A:809:74D:CAJ	2.85	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:531:ASP:O	1:D:537:VAL:HG21	2.02	0.60
1:J:629:LYS:O	1:J:718:THR:HG23	2.02	0.60
4:T:6:ARG:HD3	4:T:9:ALA:HB2	1.83	0.60
1:A:142:ASP:HB3	1:A:144:THR:HG22	1.84	0.59
2:K:399:ALA:HB1	2:K:400:LYS:HB2	1.85	0.59
3:L:596:THR:HG21	3:L:618:ASN:HD22	1.68	0.59
3:I:575:ARG:NH2	3:I:577:GLN:OE1	2.35	0.59
2:E:258:HIS:CE1	2:E:307:ASN:HA	2.37	0.59
1:G:460:THR:O	1:G:461:LYS:HD2	2.03	0.59
1:D:106:SER:HA	2:E:171:ILE:HD11	1.84	0.58
1:A:264:ILE:HD12	3:C:658:LEU:HD11	1.83	0.58
1:D:460:THR:O	1:D:461:LYS:HD2	2.04	0.58
1:G:150:ILE:HG22	1:G:155:GLY:HA2	1.84	0.58
1:J:323:GLN:NE2	1:J:462:THR:HG21	2.19	0.58
2:H:258:HIS:CE1	2:H:307:ASN:HA	2.38	0.58
1:A:272:VAL:HG12	1:A:276:GLN:HB2	1.86	0.58
1:D:65:ILE:HG22	1:D:65:ILE:O	2.04	0.58
1:A:83:CYS:HB2	1:A:98:LEU:HD13	1.86	0.57
2:E:318:LEU:HD13	2:E:353:LEU:HD12	1.87	0.57
2:B:352:ILE:HG21	2:B:355:ARG:NH1	2.20	0.56
1:D:142:ASP:HB3	1:D:144:THR:HG22	1.88	0.56
1:G:128:LEU:HD21	1:G:157:VAL:HG22	1.87	0.56
2:K:215:LEU:HB2	2:K:229:PHE:HB2	1.88	0.56
2:B:118:SER:OG	2:B:119:ASN:N	2.39	0.56
1:D:694:ASN:OD1	1:D:694:ASN:N	2.39	0.56
1:A:328:LEU:HD23	1:A:424:ILE:CG2	2.35	0.56
3:I:616:LEU:HD22	3:I:643:TYR:CD2	2.41	0.56
1:J:264:ILE:HD12	3:L:658:LEU:HD11	1.87	0.56
1:A:677:ALA:O	1:A:685:ARG:NH2	2.39	0.55
2:B:404:LEU:HB2	2:B:437:TRP:CZ3	2.42	0.55
2:B:232:VAL:HG21	3:C:591:TRP:CE3	2.42	0.55
1:J:234:LYS:HB3	1:J:240:LEU:HD21	1.87	0.55
1:G:65:ILE:HG22	1:G:65:ILE:O	2.06	0.55
1:G:320:CYS:HB3	1:G:321:GLY:HA2	1.88	0.55
1:A:68:VAL:HG11	2:B:110:PRO:HG3	1.88	0.55
1:A:56:LEU:HD21	2:B:200:PRO:HB2	1.90	0.54
2:H:232:VAL:HG21	3:I:591:TRP:CE3	2.43	0.54
1:J:618:PRO:HD3	3:L:566:PHE:CE1	2.42	0.54
1:G:263:ASN:HD21	3:I:655:ASN:HD21	1.54	0.54
1:D:136:ASP:OD2	4:R:7:M3L:N	2.39	0.54
2:B:150:CYS:HA	2:B:164:ALA:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:326:ASN:HA	2:B:358:TYR:CE1	2.43	0.54
2:B:260:LEU:HD13	2:B:331:TRP:CZ2	2.43	0.54
3:F:628:ALA:HB3	3:F:631:GLN:HG3	1.90	0.54
1:D:26:LEU:HD11	1:D:177:ALA:HB3	1.90	0.53
2:B:88:LEU:HD12	2:B:434:ILE:HD12	1.89	0.53
3:C:596:THR:HG21	3:C:618:ASN:HD22	1.73	0.53
1:G:432:TRP:CZ2	1:G:469:PHE:HB2	2.44	0.53
3:C:664:HIS:HB2	3:C:674:ILE:HD11	1.91	0.53
2:B:125:GLU:CB	2:B:135:LEU:HD21	2.39	0.52
2:E:149:THR:HG21	2:E:195:GLU:HA	1.90	0.52
2:B:126:CYS:SG	2:B:424:ILE:HD13	2.49	0.52
1:G:85:VAL:CG2	2:H:134:LEU:HD22	2.39	0.52
1:A:430:VAL:HG21	1:A:465:GLN:HE21	1.75	0.52
2:K:318:LEU:HD13	2:K:353:LEU:HD12	1.92	0.52
1:A:65:ILE:O	1:A:65:ILE:HG22	2.10	0.52
1:A:320:CYS:HB3	1:A:321:GLY:HA2	1.91	0.52
1:J:128:LEU:HD21	1:J:157:VAL:HG22	1.92	0.51
3:F:616:LEU:HD22	3:F:643:TYR:HD2	1.76	0.51
1:A:263:ASN:HA	3:C:607:ASN:ND2	2.25	0.51
1:D:68:VAL:HG11	2:E:110:PRO:CG	2.40	0.51
1:J:65:ILE:O	1:J:65:ILE:HG22	2.11	0.51
1:J:35:ALA:HA	1:J:38:VAL:HG22	1.91	0.51
2:K:260:LEU:HD13	2:K:331:TRP:CZ2	2.45	0.51
2:B:170:GLY:HA2	2:B:193:ILE:HD12	1.92	0.51
2:H:196:LEU:HD22	2:H:206:LEU:HD11	1.93	0.51
1:A:430:VAL:HG21	1:A:465:GLN:NE2	2.26	0.51
1:J:328:LEU:HD23	1:J:424:ILE:HG23	1.93	0.51
2:B:258:HIS:CE1	2:B:307:ASN:HA	2.46	0.50
2:B:358:TYR:CE1	2:B:361:CYS:HB3	2.46	0.50
2:B:397:HIS:HA	2:B:398:LYS:C	2.31	0.50
1:D:306:TYR:O	3:F:665:ASP:HB3	2.11	0.50
2:B:125:GLU:HB3	2:B:135:LEU:HD21	1.94	0.50
2:E:111:LEU:HD22	2:E:419:SER:HB2	1.93	0.50
1:G:264:ILE:HD12	3:I:658:LEU:HD11	1.92	0.50
2:K:97:PHE:CE1	4:T:7:M3L:HM12	2.46	0.50
2:H:209:VAL:HG12	2:H:215:LEU:HD23	1.94	0.50
2:B:399:ALA:HB1	2:B:400:LYS:HB2	1.94	0.50
1:A:320:CYS:HB2	1:A:324:CYS:SG	2.52	0.50
1:A:615:LEU:HD21	3:C:581:VAL:HG11	1.94	0.50
1:D:270:LYS:O	1:D:272:VAL:HG23	2.11	0.50
3:F:588:ASP:OD2	3:F:593:ARG:NH1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:604:SER:O	3:L:605:ASP:CG	2.50	0.50
3:L:628:ALA:HB3	3:L:631:GLN:HG3	1.93	0.50
3:C:570:THR:O	3:C:572:LEU:N	2.45	0.49
1:G:697:ALA:CB	1:G:710:ILE:HD13	2.42	0.49
1:A:128:LEU:CD2	1:A:157:VAL:HG22	2.43	0.49
1:A:689:HIS:CB	1:A:726:TYR:CE1	2.94	0.49
2:B:94:GLN:CA	2:B:94:GLN:HE21	2.26	0.49
2:E:301:THR:HG21	2:E:350:VAL:HG11	1.95	0.49
3:I:570:THR:O	3:I:572:LEU:N	2.45	0.49
1:G:83:CYS:HB2	1:G:98:LEU:HD13	1.94	0.48
1:A:68:VAL:HG11	2:B:110:PRO:HG2	1.94	0.48
2:B:132:ILE:HD11	2:B:436:ARG:HB2	1.95	0.48
3:I:561:HIS:HB2	3:I:562:ASN:HA	1.95	0.48
3:F:664:HIS:HB2	3:F:674:ILE:HD11	1.95	0.48
1:G:438:SER:O	1:G:442:VAL:HG23	2.13	0.48
1:G:641:TYR:HB2	1:G:710:ILE:HD11	1.95	0.48
1:G:320:CYS:HB2	1:G:324:CYS:SG	2.54	0.48
1:D:641:TYR:HH	1:D:667:PHE:HE2	1.61	0.48
1:J:650:GLU:OE1	1:J:653:ARG:NH1	2.46	0.48
1:A:328:LEU:HD23	1:A:424:ILE:HG23	1.94	0.48
4:Q:9:ALA:CB	4:Q:10:GLN:HB2	2.41	0.48
1:A:569:LYS:HB3	1:A:575:LEU:HD13	1.96	0.48
3:F:639:PHE:CE2	3:F:647:ILE:HD11	2.48	0.48
2:K:150:CYS:HA	2:K:164:ALA:O	2.14	0.48
2:K:324:CYS:SG	4:T:5:GLN:NE2	2.87	0.48
4:T:6:ARG:CD	4:T:9:ALA:HB2	2.43	0.48
1:A:320:CYS:SG	1:A:463:CYS:HB2	2.54	0.48
1:J:582:PRO:HB2	3:L:628:ALA:HB2	1.96	0.48
1:A:85:VAL:HG11	2:B:88:LEU:HD13	1.95	0.48
2:E:385:LYS:HG3	2:E:405:THR:HG22	1.95	0.48
2:E:215:LEU:HB2	2:E:229:PHE:HB2	1.96	0.48
1:G:68:VAL:HG21	2:H:110:PRO:HG2	1.96	0.47
1:A:261:THR:HG23	1:A:272:VAL:HG21	1.97	0.47
1:G:240:LEU:HD23	1:G:243:LYS:HD3	1.96	0.47
2:B:329:VAL:HG22	2:B:355:ARG:HG2	1.96	0.47
2:K:215:LEU:HD21	2:K:253:SER:HB3	1.95	0.47
2:K:97:PHE:CZ	4:T:7:M3L:HM12	2.50	0.47
3:F:596:THR:HG21	3:F:618:ASN:HD22	1.80	0.47
2:H:399:ALA:HB1	2:H:400:LYS:HB2	1.96	0.47
1:A:142:ASP:CB	1:A:144:THR:HG22	2.45	0.47
2:E:176:ASN:O	2:E:180:MET:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:657:MET:O	3:I:661:VAL:HG23	2.13	0.47
1:J:178:LEU:HD21	1:J:223:ILE:HB	1.97	0.47
1:A:464:ARG:NH1	1:A:468:GLU:OE2	2.48	0.47
2:E:232:VAL:HG21	3:F:591:TRP:CZ3	2.49	0.47
2:K:262:LEU:HB3	2:K:299:PHE:HB3	1.96	0.47
2:K:232:VAL:HG21	3:L:591:TRP:CE3	2.49	0.47
1:J:128:LEU:CD2	1:J:157:VAL:HG22	2.44	0.47
2:B:324:CYS:HB2	4:Q:5:GLN:OE1	2.14	0.47
2:B:262:LEU:HB3	2:B:299:PHE:HB3	1.97	0.47
1:A:150:ILE:CG2	1:A:155:GLY:HA2	2.43	0.47
1:A:691:VAL:O	1:A:693:PRO:HD3	2.16	0.46
1:D:98:LEU:HD12	2:E:137:SER:O	2.16	0.46
1:G:68:VAL:HG11	2:H:110:PRO:HG2	1.97	0.46
2:K:170:GLY:HA2	2:K:193:ILE:HD12	1.97	0.46
1:D:438:SER:O	1:D:442:VAL:HG23	2.16	0.46
2:H:121:VAL:HG21	2:H:163:LEU:CD2	2.45	0.46
1:J:430:VAL:HG21	1:J:465:GLN:HE21	1.81	0.46
1:J:641:TYR:HH	1:J:667:PHE:HE1	1.63	0.46
3:F:632:MET:HA	3:F:635:ALA:HB3	1.98	0.46
1:G:35:ALA:HA	1:G:38:VAL:HG22	1.98	0.46
1:J:129:HIS:HA	1:J:158:HIS:HB3	1.96	0.46
3:C:579:MET:HG3	3:C:581:VAL:HG12	1.98	0.46
3:C:646:LYS:O	3:C:650:LYS:HG3	2.15	0.46
1:A:615:LEU:HD21	3:C:581:VAL:CG1	2.46	0.46
2:H:97:PHE:CZ	4:S:7:M3L:HM12	2.51	0.46
3:C:579:MET:HA	3:C:581:VAL:N	2.31	0.46
1:G:15:TRP:CZ3	1:G:223:ILE:HG22	2.51	0.46
2:K:189:HIS:CD2	2:K:210:SER:HB3	2.51	0.46
2:B:172:ILE:HD11	2:B:208:SER:HB3	1.98	0.46
3:I:628:ALA:HB3	3:I:631:GLN:HG3	1.96	0.46
2:K:368:PHE:HB2	2:K:378:ALA:O	2.16	0.46
4:S:9:ALA:HB1	4:S:10:GLN:HB2	1.97	0.46
1:A:96:ILE:HG13	2:B:134:LEU:HG	1.98	0.46
2:B:87:SER:HB3	2:B:435:TRP:CE3	2.50	0.46
2:E:399:ALA:HB1	2:E:400:LYS:HB2	1.96	0.46
2:E:404:LEU:HB2	2:E:437:TRP:CZ3	2.51	0.46
2:H:120:ARG:HB2	2:H:138:TYR:O	2.16	0.45
1:G:68:VAL:HG11	2:H:110:PRO:CG	2.46	0.45
1:A:289:CYS:HG	5:A:801:ZN:ZN	1.26	0.45
2:B:274:ILE:O	2:B:277:SER:OG	2.26	0.45
2:E:88:LEU:CD1	2:E:434:ILE:HD12	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:128:SER:HA	2:H:129:GLN:HA	1.78	0.45
1:J:567:ASN:OD1	1:J:567:ASN:N	2.49	0.45
1:D:263:ASN:HA	3:F:607:ASN:ND2	2.31	0.45
3:I:579:MET:HG3	3:I:581:VAL:HG12	1.99	0.45
3:L:596:THR:CG2	3:L:618:ASN:HD22	2.29	0.45
2:B:215:LEU:HD21	2:B:253:SER:CB	2.47	0.45
2:E:324:CYS:SG	4:R:5:GLN:NE2	2.90	0.45
1:D:46:ARG:NH1	2:E:374:GLN:O	2.49	0.45
2:E:95:PRO:HB3	2:E:430:ASP:HA	1.99	0.45
1:G:617:ALA:HB3	1:G:627:PHE:CE1	2.51	0.45
2:E:319:ILE:HG21	2:E:331:TRP:CZ2	2.52	0.45
1:D:167:ASN:ND2	2:E:350:VAL:O	2.49	0.45
2:K:88:LEU:HD12	2:K:434:ILE:HD12	1.97	0.45
1:A:136:ASP:OD2	4:Q:7:M3L:N	2.50	0.45
1:D:579:GLU:HB2	1:D:702:VAL:HG22	1.98	0.45
2:H:324:CYS:HB2	4:S:5:GLN:OE1	2.16	0.45
1:J:127:VAL:HG23	1:J:127:VAL:O	2.16	0.45
1:A:727:ARG:O	1:A:728:TYR:CG	2.70	0.45
1:A:63:ARG:NE	2:B:154:TYR:OH	2.47	0.45
2:H:155:ASP:O	2:H:159:SER:N	2.50	0.45
2:H:227:ALA:HA	2:H:292:GLN:O	2.17	0.45
2:K:409:CYS:HA	2:K:435:TRP:CZ2	2.52	0.45
1:A:582:PRO:HB2	3:C:628:ALA:HB2	1.99	0.45
2:E:260:LEU:HD13	2:E:331:TRP:CZ2	2.52	0.45
1:G:85:VAL:HG23	2:H:134:LEU:HD22	1.98	0.45
1:A:260:CYS:SG	3:C:605:ASP:HA	2.57	0.44
1:D:582:PRO:O	1:D:591:ALA:HB2	2.16	0.44
3:F:598:THR:O	3:F:602:GLU:HG2	2.16	0.44
3:F:596:THR:CG2	3:F:618:ASN:HD22	2.31	0.44
1:G:697:ALA:HB2	1:G:710:ILE:CD1	2.46	0.44
2:H:315:LEU:HD13	2:H:370:MET:HE1	1.98	0.44
1:D:430:VAL:HG12	1:D:431:GLU:N	2.33	0.44
3:I:579:MET:HA	3:I:581:VAL:N	2.32	0.44
1:A:727:ARG:O	1:A:728:TYR:CD1	2.70	0.44
1:D:178:LEU:HD21	1:D:223:ILE:HB	1.99	0.44
2:H:386:LEU:HB2	2:H:404:LEU:HD12	1.99	0.44
2:K:395:ASP:O	2:K:397:HIS:ND1	2.50	0.44
1:A:308:ARG:HD3	3:C:664:HIS:CE1	2.53	0.44
1:D:520:TYR:CD1	1:D:520:TYR:C	2.91	0.44
2:K:128:SER:HA	2:K:129:GLN:HA	1.84	0.44
2:E:97:PHE:HA	2:E:414:ARG:HG3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:89:LEU:O	1:J:90:ASP:HB3	2.17	0.44
1:A:624:TRP:O	6:A:809:74D:CAG	2.66	0.44
1:A:447:TYR:CE1	3:C:671:ILE:HD11	2.53	0.44
1:D:19:VAL:HG22	1:D:178:LEU:HD22	1.99	0.44
3:F:561:HIS:HB2	3:F:562:ASN:HA	1.99	0.44
1:D:582:PRO:HB2	3:F:628:ALA:HB2	1.99	0.44
2:K:294:ILE:N	2:K:294:ILE:HD12	2.33	0.44
3:C:628:ALA:HB3	3:C:631:GLN:HG3	2.00	0.44
1:D:530:CYS:SG	1:D:549:CYS:CB	3.06	0.44
1:G:313:THR:HG23	1:G:315:LEU:HB2	2.00	0.44
1:G:70:ILE:HG12	2:H:135:LEU:HD22	1.99	0.44
3:L:579:MET:HA	3:L:581:VAL:N	2.33	0.44
2:B:324:CYS:SG	4:Q:5:GLN:NE2	2.91	0.43
1:D:70:ILE:HG12	2:E:135:LEU:HD22	1.99	0.43
1:D:109:ILE:HA	2:E:190:GLY:O	2.18	0.43
1:A:71:LEU:HD13	2:B:180:MET:HE3	2.00	0.43
1:D:161:ARG:NH2	1:D:233:ASP:OD2	2.51	0.43
2:E:253:SER:O	2:E:260:LEU:HA	2.18	0.43
2:K:358:TYR:CE1	2:K:361:CYS:HB3	2.53	0.43
2:B:318:LEU:HD13	2:B:353:LEU:HD12	2.01	0.43
1:D:688:ASN:HB2	1:D:723:PHE:CD2	2.53	0.43
2:K:386:LEU:HB3	2:K:404:LEU:CD1	2.48	0.43
3:I:639:PHE:CE2	3:I:647:ILE:HD11	2.52	0.43
2:K:189:HIS:CD2	2:K:210:SER:CB	3.02	0.43
1:A:727:ARG:C	1:A:728:TYR:CG	2.91	0.43
2:B:88:LEU:CD1	2:B:434:ILE:HD12	2.48	0.43
2:B:94:GLN:HA	2:B:94:GLN:HE21	1.83	0.43
2:E:241:SER:HB3	2:E:254:CYS:SG	2.58	0.43
2:B:301:THR:HG21	2:B:350:VAL:HG11	2.01	0.43
1:D:524:ASP:CG	1:D:524:ASP:O	2.56	0.43
2:E:207:LEU:HD11	2:E:215:LEU:HB3	2.00	0.43
1:G:263:ASN:HA	3:I:607:ASN:ND2	2.26	0.43
3:F:567:HIS:HB3	3:F:569:ASP:OD1	2.17	0.43
3:F:586:GLU:HB3	3:F:587:LYS:HB2	2.00	0.43
3:C:567:HIS:CE1	3:C:574:LEU:HD12	2.53	0.43
2:H:136:GLN:HE22	2:H:180:MET:HB3	1.84	0.43
3:L:632:MET:HA	3:L:635:ALA:HB3	2.01	0.43
2:E:397:HIS:HA	2:E:398:LYS:C	2.40	0.43
1:G:263:ASN:ND2	3:I:655:ASN:HD21	2.15	0.43
2:K:95:PRO:HB3	2:K:430:ASP:HA	2.00	0.43
1:D:629:LYS:O	1:D:718:THR:HG23	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:158:HIS:HA	1:G:159:GLY:HA2	1.89	0.42
2:H:121:VAL:HG21	2:H:163:LEU:HD21	2.01	0.42
2:B:125:GLU:HB2	2:B:135:LEU:HD21	2.01	0.42
2:B:386:LEU:HD21	2:B:416:THR:HG21	2.01	0.42
3:C:608:GLU:N	3:C:609:GLY:HA3	2.34	0.42
1:D:133:TYR:CE1	1:D:136:ASP:HB2	2.54	0.42
1:D:308:ARG:CD	3:F:664:HIS:CE1	3.03	0.42
1:G:677:ALA:HA	1:G:680:LYS:O	2.19	0.42
3:I:644:GLY:HA2	3:I:647:ILE:HD12	2.01	0.42
1:J:450:ASN:O	1:J:454:ILE:HD12	2.18	0.42
1:A:328:LEU:O	1:A:329:GLU:C	2.57	0.42
1:G:629:LYS:O	1:G:718:THR:HG23	2.19	0.42
1:D:328:LEU:HD23	1:D:424:ILE:CG2	2.45	0.42
1:G:145:PHE:HA	1:G:148:GLU:HG2	2.02	0.42
1:G:257:PRO:N	1:G:258:PRO:CD	2.82	0.42
1:G:655:GLY:O	1:G:659:ASP:N	2.48	0.42
2:H:119:ASN:HB3	2:H:145:GLU:O	2.20	0.42
2:H:199:HIS:HB3	2:H:202:ASP:O	2.19	0.42
3:L:581:VAL:HA	3:L:582:ASP:HA	1.88	0.42
1:G:695:CYS:SG	1:G:722:LEU:HD22	2.60	0.42
2:E:120:ARG:HB2	2:E:138:TYR:O	2.19	0.42
1:G:325:TYR:CG	1:G:325:TYR:O	2.72	0.42
1:J:263:ASN:HB3	1:J:266:GLY:HA3	2.02	0.42
1:J:640:GLU:HG3	1:J:708:ILE:O	2.20	0.42
3:L:671:ILE:HA	3:L:674:ILE:CD1	2.49	0.42
3:C:613:VAL:HG11	3:C:655:ASN:HB3	2.02	0.42
1:D:228:SER:HB3	1:D:240:LEU:HD12	2.02	0.42
2:E:149:THR:HG21	2:E:195:GLU:CA	2.50	0.42
2:E:366:MET:SD	2:E:414:ARG:NH2	2.93	0.42
2:K:339:ASP:OD1	2:K:341:ASP:N	2.53	0.42
1:A:689:HIS:HB2	1:A:726:TYR:CD1	2.55	0.42
2:B:166:ALA:HB2	2:B:196:LEU:HD11	2.00	0.42
1:D:125:GLU:OE1	2:E:236:ARG:NH2	2.53	0.42
2:E:128:SER:HA	2:E:129:GLN:HA	1.88	0.41
1:D:101:LEU:N	2:E:139:VAL:O	2.51	0.41
2:H:215:LEU:HB2	2:H:229:PHE:HB2	2.02	0.41
3:L:579:MET:HG3	3:L:581:VAL:HG12	2.02	0.41
1:A:325:TYR:CG	1:A:325:TYR:O	2.73	0.41
2:E:196:LEU:HD23	2:E:208:SER:HA	2.02	0.41
2:H:319:ILE:HG21	2:H:331:TRP:CZ2	2.56	0.41
1:J:313:THR:O	1:J:314:ALA:HB3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:328:LEU:HD23	1:J:424:ILE:CG2	2.50	0.41
1:J:68:VAL:HG13	1:J:68:VAL:O	2.21	0.41
2:E:194:ASN:ND2	2:E:240:LEU:HD23	2.34	0.41
2:E:86:ASN:OD1	2:E:87:SER:N	2.53	0.41
1:D:129:HIS:HA	1:D:158:HIS:HB3	2.02	0.41
1:G:168:ASP:O	1:G:172:VAL:HG23	2.21	0.41
1:G:697:ALA:HB3	1:G:728:TYR:HH	1.82	0.41
1:G:72:THR:O	1:G:72:THR:HG22	2.20	0.41
1:J:667:PHE:HZ	1:J:726:TYR:CE2	2.38	0.41
1:A:328:LEU:HD22	1:A:425:GLU:HB2	2.02	0.41
1:D:158:HIS:HA	1:D:159:GLY:HA2	1.77	0.41
2:B:160:HIS:HB3	2:B:176:ASN:HD21	1.86	0.41
2:E:138:TYR:CE1	2:E:175:ILE:HG21	2.55	0.41
1:J:430:VAL:HG12	1:J:431:GLU:H	1.84	0.41
1:J:552:GLU:O	1:J:552:GLU:HG3	2.20	0.41
1:A:334:PHE:HA	1:A:337:ALA:HB3	2.03	0.41
1:D:677:ALA:O	1:D:685:ARG:NH2	2.50	0.41
2:K:99:VAL:HG13	2:K:417:SER:HB2	2.03	0.41
3:L:594:GLU:O	3:L:598:THR:HG23	2.20	0.41
4:R:3:GLN:HE22	4:R:6:ARG:HH22	1.69	0.41
2:B:215:LEU:N	2:B:215:LEU:HD12	2.35	0.41
1:D:696:TYR:CE1	1:D:711:PHE:HB2	2.56	0.41
1:G:178:LEU:HD23	1:G:223:ILE:HD13	2.03	0.41
2:K:397:HIS:HA	2:K:399:ALA:N	2.36	0.41
1:A:39:LYS:HE3	2:B:394:GLU:HB2	2.01	0.41
1:G:127:VAL:HG12	1:G:156:LYS:CB	2.50	0.41
1:J:263:ASN:ND2	3:L:655:ASN:HD21	2.18	0.41
1:J:330:GLY:HA2	1:J:334:PHE:HB2	2.02	0.41
4:Q:9:ALA:CA	4:Q:10:GLN:HB2	2.50	0.41
1:A:688:ASN:OD1	6:A:809:74D:CAG	2.69	0.41
1:D:717:GLN:HE21	1:D:717:GLN:HB2	1.71	0.41
2:E:294:ILE:HD12	2:E:294:ILE:N	2.36	0.41
1:G:106:SER:HB2	2:H:169:ARG:NH1	2.35	0.41
2:K:396:PRO:HA	2:K:397:HIS:CG	2.56	0.41
3:L:561:HIS:HB2	3:L:562:ASN:HA	2.02	0.41
2:B:356:PHE:CE1	2:B:397:HIS:CD2	3.09	0.40
1:D:96:ILE:HG13	2:E:134:LEU:HG	2.02	0.40
3:I:596:THR:HG21	3:I:618:ASN:HD22	1.86	0.40
1:J:257:PRO:N	1:J:258:PRO:CD	2.84	0.40
1:A:128:LEU:HD21	1:A:157:VAL:HG22	2.02	0.40
1:A:35:ALA:HA	1:A:38:VAL:HG22	2.01	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:96:ILE:HG22	1:A:97:PRO:O	2.21	0.40
1:D:431:GLU:O	1:D:461:LYS:NZ	2.50	0.40
1:G:272:VAL:HG12	1:G:273:GLN:N	2.35	0.40
1:J:263:ASN:HA	3:L:607:ASN:HD21	1.86	0.40
2:K:131:GLU:OE1	2:K:133:ARG:NH2	2.54	0.40
2:K:86:ASN:OD1	2:K:87:SER:N	2.54	0.40
1:A:68:VAL:HG23	2:B:112:VAL:HG22	2.03	0.40
1:A:727:ARG:O	1:A:728:TYR:CB	2.69	0.40
3:C:617:TRP:O	3:C:620:HIS:N	2.55	0.40
1:D:302:THR:HG22	1:D:305:THR:HB	2.03	0.40
2:E:222:THR:O	2:E:224:THR:HG23	2.22	0.40
1:J:142:ASP:CB	1:J:144:THR:HG22	2.51	0.40
3:C:581:VAL:HA	3:C:582:ASP:HA	1.87	0.40
1:D:592:ASP:O	1:D:593:HIS:C	2.60	0.40
1:G:107:VAL:HG22	1:G:108:PRO:HD2	2.02	0.40
1:G:528:GLN:N	1:G:528:GLN:OE1	2.55	0.40
2:K:120:ARG:HB2	2:K:138:TYR:O	2.22	0.40
2:K:87:SER:HB2	2:K:435:TRP:CE3	2.57	0.40
2:B:199:HIS:HB2	2:B:205:LEU:HB2	2.04	0.40
3:F:581:VAL:HA	3:F:582:ASP:HA	1.84	0.40
2:H:324:CYS:SG	4:S:5:GLN:CD	3.00	0.40
1:J:279:HIS:O	1:J:283:THR:HG22	2.21	0.40
1:J:644:GLU:O	1:J:675:VAL:HA	2.22	0.40
2:K:196:LEU:HD22	2:K:206:LEU:HD11	2.03	0.40

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	558/695 (80%)	501 (90%)	51 (9%)	6 (1%)	<b>17</b> 58

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	D	558/695 (80%)	504 (90%)	44 (8%)	10 (2%)	10	46
1	G	560/695 (81%)	513 (92%)	41 (7%)	6 (1%)	17	58
1	J	558/695 (80%)	501 (90%)	50 (9%)	7 (1%)	14	54
2	B	363/367 (99%)	330 (91%)	31 (8%)	2 (1%)	28	70
2	E	363/367 (99%)	331 (91%)	27 (7%)	5 (1%)	13	52
2	H	363/367 (99%)	346 (95%)	16 (4%)	1 (0%)	44	81
2	K	363/367 (99%)	334 (92%)	27 (7%)	2 (1%)	28	70
3	C	123/129 (95%)	113 (92%)	8 (6%)	2 (2%)	11	49
3	F	123/129 (95%)	112 (91%)	10 (8%)	1 (1%)	22	65
3	I	123/129 (95%)	118 (96%)	4 (3%)	1 (1%)	22	65
3	L	123/129 (95%)	113 (92%)	10 (8%)	0	100	100
4	Q	7/11 (64%)	6 (86%)	0	1 (14%)	0	3
4	R	7/11 (64%)	7 (100%)	0	0	100	100
4	S	7/11 (64%)	7 (100%)	0	0	100	100
4	T	7/11 (64%)	4 (57%)	2 (29%)	1 (14%)	0	3
All	All	4206/4808 (88%)	3840 (91%)	321 (8%)	45 (1%)	17	58

All (45) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	68	VAL
1	A	103	ALA
2	B	257	ASP
1	D	103	ALA
1	J	103	ALA
4	T	9	ALA
1	A	323	GLN
1	A	331	ALA
1	A	565	GLN
3	C	571	CYS
1	D	119	ASN
1	D	323	GLN
1	D	545	LYS
2	E	414	ARG
1	G	103	ALA
1	G	331	ALA
1	G	545	LYS

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Mol	Chain	Res	Type
1	G	565	GLN
3	I	571	CYS
1	J	423	ASN
1	J	545	LYS
4	Q	10	GLN
1	A	593	HIS
2	B	145	GLU
1	D	550	SER
1	D	562	CYS
2	E	213	HIS
2	K	397	HIS
3	C	590	GLU
1	D	693	PRO
3	F	571	CYS
1	J	331	ALA
1	J	593	HIS
2	K	398	LYS
2	E	257	ASP
2	E	397	HIS
1	G	532	SER
2	H	397	HIS
1	D	448	TYR
1	J	119	ASN
2	E	395	ASP
1	G	68	VAL
1	D	68	VAL
1	J	68	VAL
1	D	322	PRO

### 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	511/618 (83%)	486 (95%)	25 (5%)	29	65
1	D	511/618 (83%)	482 (94%)	29 (6%)	24	61
1	G	513/618 (83%)	482 (94%)	31 (6%)	22	59

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	J	511/618 (83%)	482 (94%)	29 (6%)	24	61
2	B	328/329 (100%)	316 (96%)	12 (4%)	39	73
2	E	328/329 (100%)	316 (96%)	12 (4%)	39	73
2	H	328/329 (100%)	318 (97%)	10 (3%)	46	78
2	K	328/329 (100%)	321 (98%)	7 (2%)	59	84
3	C	119/121 (98%)	113 (95%)	6 (5%)	28	64
3	F	119/121 (98%)	116 (98%)	3 (2%)	53	81
3	I	119/121 (98%)	115 (97%)	4 (3%)	42	75
3	L	119/121 (98%)	118 (99%)	1 (1%)	85	94
4	Q	7/8 (88%)	5 (71%)	2 (29%)	0	3
4	R	7/8 (88%)	5 (71%)	2 (29%)	0	3
4	S	7/8 (88%)	6 (86%)	1 (14%)	4	21
4	T	7/8 (88%)	5 (71%)	2 (29%)	0	3
All	All	3862/4304 (90%)	3686 (95%)	176 (5%)	31	67

All (176) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	22	GLU
1	A	68	VAL
1	A	102	ASN
1	A	129	HIS
1	A	134	MET
1	A	136	ASP
1	A	137	GLU
1	A	163	CYS
1	A	182	ASN
1	A	263	ASN
1	A	284	LEU
1	A	325	TYR
1	A	342	ARG
1	A	429	ASN
1	A	460	THR
1	A	553	CYS
1	A	587	THR
1	A	593	HIS
1	A	607	GLN

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Mol	Chain	Res	Type
1	A	657	VAL
1	A	663	CYS
1	A	692	ASN
1	A	714	ARG
1	A	717	GLN
1	A	728	TYR
2	B	88	LEU
2	B	94	GLN
2	B	131	GLU
2	B	189	HIS
2	B	212	ASP
2	B	223	ASP
2	B	225	LEU
2	B	298	ASP
2	B	337	GLU
2	B	370	MET
2	B	386	LEU
2	B	404	LEU
3	C	568	SER
3	C	571	CYS
3	C	590	GLU
3	C	592	LEU
3	C	596	THR
3	C	605	ASP
1	D	22	GLU
1	D	40	SER
1	D	66	GLN
1	D	84	SER
1	D	86	THR
1	D	129	HIS
1	D	134	MET
1	D	140	ASP
1	D	142	ASP
1	D	182	ASN
1	D	211	GLU
1	D	259	GLU
1	D	260	CYS
1	D	263	ASN
1	D	283	THR
1	D	284	LEU
1	D	311	THR
1	D	320	CYS

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Mol	Chain	Res	Type
1	D	325	TYR
1	D	587	THR
1	D	592	ASP
1	D	595	ASP
1	D	605	SER
1	D	607	GLN
1	D	694	ASN
1	D	696	TYR
1	D	708	ILE
1	D	717	GLN
1	D	727	ARG
2	E	100	GLN
2	E	159	SER
2	E	160	HIS
2	E	271	MET
2	E	286	ASN
2	E	307	ASN
2	E	322	LYS
2	E	367	ARG
2	E	394	GLU
2	E	403	THR
2	E	404	LEU
2	E	438	ASP
3	F	590	GLU
3	F	605	ASP
3	F	662	SER
1	G	22	GLU
1	G	66	GLN
1	G	76	SER
1	G	80	THR
1	G	81	ARG
1	G	86	THR
1	G	88	ASP
1	G	92	PRO
1	G	96	ILE
1	G	114	SER
1	G	129	HIS
1	G	134	MET
1	G	137	GLU
1	G	142	ASP
1	G	182	ASN
1	G	260	CYS

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Mol	Chain	Res	Type
1	G	262	PRO
1	G	263	ASN
1	G	325	TYR
1	G	342	ARG
1	G	438	SER
1	G	460	THR
1	G	526	PRO
1	G	552	GLU
1	G	587	THR
1	G	607	GLN
1	G	664	SER
1	G	708	ILE
1	G	727	ARG
1	G	729	SER
1	G	730	GLN
2	H	87	SER
2	H	94	GLN
2	H	160	HIS
2	H	189	HIS
2	H	223	ASP
2	H	260	LEU
2	H	271	MET
2	H	361	CYS
2	H	376	MET
2	H	404	LEU
3	I	592	LEU
3	I	605	ASP
3	I	642	ASN
3	I	649	LYS
1	J	22	GLU
1	J	66	GLN
1	J	77	LEU
1	J	80	THR
1	J	81	ARG
1	J	84	SER
1	J	98	LEU
1	J	102	ASN
1	J	107	VAL
1	J	128	LEU
1	J	129	HIS
1	J	134	MET
1	J	136	ASP

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Mol	Chain	Res	Type
1	J	137	GLU
1	J	182	ASN
1	J	242	GLU
1	J	263	ASN
1	J	284	LEU
1	J	311	THR
1	J	317	ASN
1	J	320	CYS
1	J	342	ARG
1	J	449	ASP
1	J	460	THR
1	J	550	SER
1	J	567	ASN
1	J	588	CYS
1	J	607	GLN
1	J	708	ILE
2	K	88	LEU
2	K	160	HIS
2	K	189	HIS
2	K	337	GLU
2	K	376	MET
2	K	386	LEU
2	K	404	LEU
3	L	590	GLU
4	Q	2	LEU
4	Q	3	GLN
4	R	3	GLN
4	R	11	SER
4	S	2	LEU
4	T	2	LEU
4	T	5	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (63) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	152	ASN
1	A	263	ASN
1	A	717	GLN
2	B	94	GLN
2	B	100	GLN
2	B	160	HIS
2	B	176	ASN

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Mol	Chain	Res	Type
2	B	258	HIS
2	B	349	ASN
3	C	607	ASN
3	C	633	ASN
3	C	642	ASN
3	C	667	ASN
1	D	152	ASN
1	D	689	HIS
1	D	717	GLN
2	E	94	GLN
2	E	100	GLN
2	E	189	HIS
2	E	219	ASN
2	E	258	HIS
2	E	349	ASN
2	E	407	HIS
3	F	599	GLN
3	F	607	ASN
3	F	633	ASN
3	F	642	ASN
3	F	651	ASN
3	F	655	ASN
1	G	152	ASN
1	G	282	HIS
1	G	607	GLN
1	G	689	HIS
1	G	717	GLN
2	H	94	GLN
2	H	176	ASN
2	H	258	HIS
2	H	286	ASN
3	I	607	ASN
3	I	633	ASN
3	I	634	HIS
3	I	642	ASN
3	I	655	ASN
1	J	47	GLN
1	J	66	GLN
1	J	152	ASN
1	J	182	ASN
1	J	263	ASN
2	K	189	HIS

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Mol	Chain	Res	Type
2	K	258	HIS
2	K	286	ASN
2	K	349	ASN
3	L	607	ASN
3	L	630	ASN
3	L	633	ASN
3	L	642	ASN
3	L	645	GLN
4	Q	3	GLN
4	Q	10	GLN
4	R	3	GLN
4	S	3	GLN
4	S	5	GLN
4	T	5	GLN

### 5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

4 non-standard protein/DNA/RNA residues 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	$\# Z  > 2$
4	M3L	Q	7	4	11,11,12	0.68	0	11,14,16	0.76	0
4	M3L	R	7	4	11,11,12	0.96	0	11,14,16	1.25	1 (9%)
4	M3L	S	7	4	11,11,12	0.60	0	11,14,16	1.13	1 (9%)
4	M3L	T	7	4	11,11,12	0.52	0	11,14,16	1.22	2 (18%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	M3L	Q	7	4	-	0/8/10/12	0/0/0/0
4	M3L	R	7	4	-	0/8/10/12	0/0/0/0
4	M3L	S	7	4	-	0/8/10/12	0/0/0/0
4	M3L	T	7	4	-	0/8/10/12	0/0/0/0

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	R	7	M3L	CB-CA-C	-3.47	105.93	111.65
4	T	7	M3L	CB-CA-C	-3.15	106.46	111.65
4	S	7	M3L	CB-CA-C	-2.65	107.29	111.65
4	T	7	M3L	O-C-CA	-2.09	119.26	125.02

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	Q	7	M3L	1	0
4	R	7	M3L	1	0
4	S	7	M3L	1	0
4	T	7	M3L	2	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 36 ligands modelled in this entry, 32 are monoatomic - leaving 4 for Mogul analysis.

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
6	74D	A	809	-	34,40,40	3.25	11 (32%)	42,59,59	2.26	8 (19%)
6	74D	D	809	-	34,40,40	3.07	9 (26%)	42,59,59	2.64	10 (23%)
6	74D	G	809	-	34,40,40	2.92	10 (29%)	42,59,59	2.81	14 (33%)
6	74D	J	809	-	34,40,40	3.06	10 (29%)	42,59,59	2.70	12 (28%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	74D	A	809	-	-	0/17/50/50	0/3/4/4
6	74D	D	809	-	-	0/17/50/50	0/3/4/4
6	74D	G	809	-	-	0/17/50/50	0/3/4/4
6	74D	J	809	-	-	0/17/50/50	0/3/4/4

All (40) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	A	809	74D	CAN-CAM	-11.64	1.33	1.51
6	J	809	74D	CAN-CAM	-10.46	1.34	1.51
6	A	809	74D	CAC-CAB	-9.53	1.39	1.50
6	D	809	74D	CAN-CAM	-9.47	1.36	1.51
6	D	809	74D	CAC-CAB	-9.10	1.39	1.50
6	G	809	74D	CAN-CAM	-8.75	1.37	1.51
6	J	809	74D	CAC-CAB	-7.60	1.41	1.50
6	G	809	74D	CAC-CAB	-7.56	1.41	1.50
6	D	809	74D	CAG-CAF	-6.45	1.38	1.50
6	A	809	74D	CAG-CAF	-5.82	1.39	1.50
6	G	809	74D	CAG-CAF	-5.76	1.39	1.50
6	J	809	74D	CAG-CAF	-5.70	1.39	1.50
6	D	809	74D	FBI-CBH	-3.00	1.27	1.36
6	A	809	74D	CAC-CAD	-2.54	1.39	1.51
6	J	809	74D	CAC-CAD	-2.26	1.40	1.51
6	A	809	74D	CAN-CAP	-2.24	1.35	1.40
6	A	809	74D	CAK-CAC	-2.14	1.39	1.52
6	A	809	74D	CAP-NAQ	-2.09	1.35	1.39
6	G	809	74D	CAC-CAD	-2.06	1.41	1.51
6	D	809	74D	CAC-CAD	-2.05	1.41	1.51
6	G	809	74D	CBA-CAY	2.06	1.58	1.53
6	G	809	74D	CBG-NBD	2.06	1.49	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	J	809	74D	CBG-NBD	2.12	1.49	1.47
6	D	809	74D	CAX-CAP	2.17	1.54	1.49
6	A	809	74D	CAU-CAT	2.18	1.41	1.36
6	A	809	74D	CAV-CAW	2.19	1.41	1.36
6	G	809	74D	CBB-CBA	2.30	1.58	1.53
6	J	809	74D	CAX-CAP	2.51	1.55	1.49
6	G	809	74D	FBJ-CBH	2.68	1.44	1.36
6	J	809	74D	CBA-CAY	2.85	1.60	1.53
6	J	809	74D	CBB-CBA	3.12	1.60	1.53
6	D	809	74D	CBG-NBD	3.22	1.50	1.47
6	D	809	74D	CAF-NAE	4.18	1.40	1.33
6	A	809	74D	CAF-NAE	4.41	1.40	1.33
6	G	809	74D	CAF-NAE	4.44	1.40	1.33
6	J	809	74D	CAF-NAE	4.53	1.40	1.33
6	D	809	74D	CAR-NAQ	5.51	1.45	1.39
6	J	809	74D	CAR-NAQ	5.79	1.46	1.39
6	A	809	74D	CAR-NAQ	5.89	1.46	1.39
6	G	809	74D	CAR-NAQ	7.20	1.47	1.39

All (44) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	J	809	74D	OAI-CAB-CAA	-6.93	119.94	125.93
6	D	809	74D	CAC-CAK-NAL	-5.96	101.57	112.32
6	A	809	74D	CAX-CAP-CAN	-5.73	120.05	129.16
6	G	809	74D	OAI-CAB-CAA	-4.83	121.76	125.93
6	G	809	74D	CAX-CAP-CAN	-4.70	121.68	129.16
6	J	809	74D	CAX-CAP-CAN	-4.55	121.91	129.16
6	A	809	74D	OAI-CAB-CAA	-4.51	122.03	125.93
6	D	809	74D	CAX-CAP-CAN	-4.39	122.18	129.16
6	A	809	74D	CAJ-OAI-CAB	-4.20	109.20	116.39
6	G	809	74D	CAC-CAK-NAL	-3.90	105.28	112.32
6	J	809	74D	CAC-CAK-NAL	-3.45	106.10	112.32
6	G	809	74D	CAA-CAF-NAE	-3.09	119.30	122.73
6	J	809	74D	CAA-CAF-NAE	-2.87	119.54	122.73
6	G	809	74D	CBB-CBA-CBF	-2.84	104.60	109.43
6	J	809	74D	CAV-CAW-CAS	-2.82	116.85	120.88
6	J	809	74D	CBE-NBD-CBG	-2.75	106.70	111.80
6	D	809	74D	CBC-CBB-CBA	-2.72	103.85	109.42
6	A	809	74D	CAB-CAA-CAF	-2.49	119.31	125.23
6	A	809	74D	CAA-CAF-NAE	-2.49	119.97	122.73
6	J	809	74D	CAB-CAA-CAF	-2.42	119.48	125.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	A	809	74D	CAZ-CAY-CBA	-2.34	109.33	113.61
6	G	809	74D	CAS-CAN-CAM	-2.28	122.23	125.83
6	G	809	74D	CBC-CBB-CBA	-2.27	104.77	109.42
6	D	809	74D	CAV-CAW-CAS	-2.25	117.66	120.88
6	J	809	74D	CBB-CBC-NBD	-2.21	107.44	110.99
6	D	809	74D	CAB-CAA-CAF	-2.20	120.01	125.23
6	D	809	74D	CAW-CAS-CAN	-2.17	131.04	135.53
6	D	809	74D	CAA-CAF-NAE	-2.16	120.33	122.73
6	J	809	74D	CAW-CAS-CAN	-2.10	131.20	135.53
6	G	809	74D	CBE-CBF-CBA	-2.06	105.21	109.42
6	D	809	74D	CBC-NBD-CBE	2.07	113.57	108.87
6	G	809	74D	CAG-CAF-NAE	2.23	119.37	116.68
6	G	809	74D	CBC-NBD-CBG	2.57	116.55	111.80
6	A	809	74D	CAG-CAF-NAE	2.68	119.91	116.68
6	J	809	74D	CAZ-CAY-CBA	2.76	118.64	113.61
6	D	809	74D	CAG-CAF-NAE	2.79	120.05	116.68
6	G	809	74D	CBE-NBD-CBG	2.82	117.03	111.80
6	G	809	74D	CBF-CBE-NBD	2.88	115.60	110.99
6	J	809	74D	CAG-CAF-NAE	2.97	120.26	116.68
6	G	809	74D	CBC-NBD-CBE	5.22	120.69	108.87
6	A	809	74D	CAK-CAC-CAD	9.95	119.85	108.89
6	J	809	74D	CAK-CAC-CAD	11.94	122.05	108.89
6	G	809	74D	CAK-CAC-CAD	11.94	122.05	108.89
6	D	809	74D	CAK-CAC-CAD	12.90	123.11	108.89

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	A	809	74D	4	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:



Mol	Chain	Number of breaks
1	G	1
1	J	1
1	A	1
1	D	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	182:ASN	C	211:GLU	N	6.31
1	G	182:ASN	C	211:GLU	N	5.74
1	D	182:ASN	C	211:GLU	N	5.71
1	J	182:ASN	C	211:GLU	N	5.36

## 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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	570/695 (82%)	0.86	76 (13%) 4 5	51, 108, 183, 239	0
1	D	570/695 (82%)	0.55	49 (8%) 11 13	56, 100, 177, 259	0
1	G	572/695 (82%)	0.81	83 (14%) 3 4	49, 107, 192, 252	0
1	J	570/695 (82%)	0.95	93 (16%) 2 3	52, 108, 203, 254	0
2	B	365/367 (99%)	0.33	16 (4%) 35 30	54, 94, 139, 213	0
2	E	365/367 (99%)	0.24	3 (0%) 86 79	57, 93, 137, 198	0
2	H	365/367 (99%)	0.17	7 (1%) 67 60	49, 80, 120, 216	0
2	K	365/367 (99%)	0.13	3 (0%) 86 79	46, 74, 118, 208	0
3	C	125/129 (96%)	0.55	8 (6%) 20 18	67, 100, 168, 233	0
3	F	125/129 (96%)	0.36	6 (4%) 31 26	58, 92, 161, 219	0
3	I	125/129 (96%)	0.43	5 (4%) 39 34	73, 104, 163, 202	0
3	L	125/129 (96%)	0.67	14 (11%) 6 7	69, 113, 163, 229	0
4	Q	9/11 (81%)	0.27	0 100 100	77, 101, 126, 131	0
4	R	9/11 (81%)	0.60	1 (11%) 6 8	77, 95, 135, 138	0
4	S	9/11 (81%)	0.81	1 (11%) 6 8	93, 119, 137, 139	0
4	T	9/11 (81%)	1.21	2 (22%) 1 1	101, 117, 159, 165	0
All	All	4278/4808 (88%)	0.56	367 (8%) 11 13	46, 95, 181, 259	0

All (367) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	J	479	PRO	10.3
1	J	429	ASN	9.6
1	J	480	ALA	9.5
1	G	480	ALA	8.8
1	A	75	SER	8.7

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Mol	Chain	Res	Type	RSRZ
1	A	345	THR	8.3
1	J	430	VAL	8.0
1	A	423	ASN	7.9
1	A	422	PRO	7.9
1	A	480	ALA	7.8
1	A	72	THR	7.8
1	J	214	PRO	7.4
1	G	313	THR	7.4
1	J	215	PRO	7.3
1	J	423	ASN	7.2
1	A	344	LYS	6.8
1	A	214	PRO	6.8
1	D	75	SER	6.6
2	K	441	ARG	6.5
1	J	312	GLU	6.5
1	D	79	GLY	6.5
1	A	76	SER	6.4
3	L	653	CYS	6.3
1	G	214	PRO	6.2
1	A	73	SER	6.2
1	J	180	GLN	6.1
3	C	583	SER	6.1
1	A	479	PRO	6.0
1	A	427	PRO	5.8
1	G	422	PRO	5.8
1	J	422	PRO	5.8
1	G	479	PRO	5.8
1	J	425	GLU	5.8
1	J	432	TRP	5.7
1	A	478	ALA	5.7
1	J	212	SER	5.6
1	G	182	ASN	5.6
1	J	310	ASN	5.6
1	D	423	ASN	5.5
1	J	321	GLY	5.5
1	J	313	THR	5.5
1	J	216	ARG	5.4
1	G	312	GLU	5.4
1	G	344	LYS	5.4
1	G	141	GLN	5.4
4	T	2	LEU	5.3
3	F	583	SER	5.3

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Mol	Chain	Res	Type	RSRZ
1	G	345	THR	5.3
1	G	216	ARG	5.2
1	G	180	GLN	5.1
3	I	684	MET	5.1
1	G	142	ASP	5.0
1	G	309	LYS	4.9
1	J	327	HIS	4.8
3	L	583	SER	4.8
1	J	314	ALA	4.8
3	L	582	ASP	4.8
1	A	424	ILE	4.8
1	G	321	GLY	4.7
1	J	426	PRO	4.7
1	A	477	ILE	4.7
1	J	428	GLU	4.7
1	J	309	LYS	4.6
1	D	74	VAL	4.5
1	A	80	THR	4.5
1	J	315	LEU	4.5
1	J	306	TYR	4.5
1	D	15	TRP	4.5
1	J	182	ASN	4.5
1	J	478	ALA	4.4
1	G	248	THR	4.4
1	G	527	ARG	4.4
1	G	212	SER	4.4
1	G	310	ASN	4.3
1	J	345	THR	4.3
1	D	230	MET	4.3
1	J	72	THR	4.3
1	A	78	ARG	4.3
3	C	581	VAL	4.2
1	G	179	GLY	4.2
1	J	224	PHE	4.2
1	G	10	LYS	4.2
1	A	74	VAL	4.2
1	D	247	LEU	4.2
1	G	447	TYR	4.2
3	C	584	GLU	4.2
1	G	429	ASN	4.1
1	J	141	GLN	4.1
1	J	424	ILE	4.1

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Mol	Chain	Res	Type	RSRZ
1	A	426	PRO	4.0
1	G	259	GLU	4.0
1	A	178	LEU	4.0
1	J	322	PRO	4.0
1	A	10	LYS	4.0
1	J	142	ASP	4.0
1	G	444	ILE	4.0
1	D	312	GLU	3.9
1	J	440	PHE	3.9
1	A	141	GLN	3.9
2	H	77	LYS	3.9
1	A	170	ILE	3.9
1	A	258	PRO	3.9
1	J	211	GLU	3.9
1	D	76	SER	3.8
3	L	584	GLU	3.8
1	A	77	LEU	3.8
1	D	227	ILE	3.8
1	J	311	THR	3.8
1	G	314	ALA	3.8
1	G	178	LEU	3.8
1	G	340	ALA	3.7
1	G	423	ASN	3.7
1	D	214	PRO	3.7
1	J	439	MET	3.7
1	G	213	ARG	3.7
1	A	212	SER	3.7
1	J	319	PRO	3.6
1	G	77	LEU	3.6
3	C	561	HIS	3.6
2	B	441	ARG	3.6
1	J	213	ARG	3.6
1	D	329	GLU	3.6
1	A	476	ILE	3.5
1	G	306	TYR	3.5
1	J	344	LYS	3.5
1	A	211	GLU	3.4
1	D	223	ILE	3.4
1	G	245	LYS	3.4
3	F	584	GLU	3.4
1	G	327	HIS	3.4
1	J	178	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
1	J	264	ILE	3.4
1	J	427	PRO	3.4
1	G	311	THR	3.4
1	G	244	TYR	3.3
1	J	278	LEU	3.3
4	T	11	SER	3.3
1	A	432	TRP	3.3
1	A	429	ASN	3.3
2	E	77	LYS	3.3
1	G	315	LEU	3.3
1	D	141	GLN	3.3
1	D	327	HIS	3.3
3	C	562	ASN	3.3
2	H	395	ASP	3.3
1	G	181	TYR	3.3
3	F	561	HIS	3.3
1	J	258	PRO	3.2
2	B	175	ILE	3.2
1	G	221	ASP	3.2
1	A	316	ASP	3.2
1	G	526	PRO	3.2
1	G	220	SER	3.2
1	G	467	TYR	3.2
2	B	124	TYR	3.2
3	L	654	ARG	3.2
1	D	314	ALA	3.2
3	L	581	VAL	3.2
2	K	395	ASP	3.2
1	D	177	ALA	3.2
1	G	430	VAL	3.2
1	D	722	LEU	3.2
1	D	311	THR	3.2
3	L	609	GLY	3.1
1	G	72	THR	3.1
1	A	181	TYR	3.1
1	J	76	SER	3.1
1	D	73	SER	3.1
1	D	345	THR	3.1
1	J	305	THR	3.1
1	G	223	ILE	3.1
1	G	305	THR	3.1
1	G	319	PRO	3.0

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Mol	Chain	Res	Type	RSRZ
1	J	227	ILE	3.0
1	G	73	SER	3.0
3	L	656	PHE	3.0
1	A	306	TYR	3.0
1	J	467	TYR	3.0
1	G	222	LYS	3.0
4	R	11	SER	3.0
1	D	249	GLN	3.0
1	G	249	GLN	2.9
1	G	247	LEU	2.9
1	A	249	GLN	2.9
1	A	314	ALA	2.9
1	A	475	SER	2.9
1	D	240	LEU	2.9
1	G	232	PRO	2.9
1	J	77	LEU	2.9
1	D	694	ASN	2.9
3	I	583	SER	2.9
1	J	343	ILE	2.9
1	G	233	ASP	2.9
1	J	301	ALA	2.9
3	L	657	MET	2.9
1	G	335	ALA	2.9
2	B	77	LYS	2.9
1	A	247	LEU	2.8
1	D	243	LYS	2.8
1	J	269	ALA	2.8
1	D	235	GLY	2.8
1	J	431	GLU	2.8
1	G	215	PRO	2.8
1	A	28	GLN	2.8
1	J	466	VAL	2.8
1	J	329	GLU	2.8
1	D	244	TYR	2.8
1	J	271	SER	2.8
3	F	579	MET	2.8
1	J	247	LEU	2.8
1	J	223	ILE	2.8
2	E	104	HIS	2.8
1	J	179	GLY	2.8
1	A	264	ILE	2.7
2	B	177	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
1	G	457	LEU	2.7
1	A	694	ASN	2.7
1	A	431	GLU	2.7
1	G	301	ALA	2.7
1	G	32	PHE	2.7
1	D	181	TYR	2.7
1	J	464	ARG	2.7
1	J	15	TRP	2.6
3	L	684	MET	2.6
3	L	585	ASP	2.6
1	A	315	LEU	2.6
1	J	10	LYS	2.6
1	A	79	GLY	2.6
1	G	171	PHE	2.6
1	J	232	PRO	2.6
1	A	428	GLU	2.6
1	J	163	CYS	2.6
1	D	80	THR	2.6
1	A	430	VAL	2.6
1	D	156	LYS	2.6
1	A	716	ILE	2.6
1	D	239	GLU	2.5
1	J	436	GLU	2.5
1	G	307	LYS	2.5
1	A	180	GLN	2.5
3	F	571	CYS	2.5
1	G	257	PRO	2.5
1	D	331	ALA	2.5
1	J	181	TYR	2.5
1	D	69	HIS	2.5
1	A	226	ALA	2.5
1	G	343	ILE	2.5
1	D	171	PHE	2.5
1	D	248	THR	2.5
1	A	574	TYR	2.5
1	J	155	GLY	2.5
1	D	224	PHE	2.5
1	G	13	VAL	2.5
1	G	322	PRO	2.5
1	G	712	ALA	2.5
1	J	249	GLN	2.5
1	J	242	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
2	B	138	TYR	2.4
1	A	302	THR	2.4
2	B	183	ILE	2.4
3	C	668	LEU	2.4
1	A	11	GLY	2.4
1	G	23	TYR	2.4
1	J	433	SER	2.4
1	G	341	GLU	2.4
1	J	340	ALA	2.4
1	A	171	PHE	2.4
1	D	211	GLU	2.4
1	J	435	ALA	2.4
1	J	68	VAL	2.4
1	D	723	PHE	2.4
2	K	398	LYS	2.4
1	G	446	THR	2.4
1	A	213	ARG	2.3
1	A	667	PHE	2.3
1	J	140	ASP	2.3
3	I	685	GLN	2.3
1	A	166	ILE	2.3
2	B	161	PRO	2.3
2	B	158	THR	2.3
1	J	307	LYS	2.3
1	D	425	GLU	2.3
3	L	685	GLN	2.3
4	S	2	LEU	2.3
2	B	398	LYS	2.3
1	A	268	ASN	2.3
1	D	313	THR	2.3
1	J	246	GLU	2.3
1	D	170	ILE	2.3
1	D	695	CYS	2.3
1	G	260	CYS	2.3
1	J	235	GLY	2.3
3	F	562	ASN	2.3
3	C	582	ASP	2.3
1	J	12	PRO	2.3
1	A	722	LEU	2.3
1	A	261	THR	2.3
1	G	17	LYS	2.3
1	G	211	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
2	B	395	ASP	2.3
2	B	163	LEU	2.3
1	A	695	CYS	2.3
3	L	613	VAL	2.2
1	G	11	GLY	2.2
1	A	83	CYS	2.2
1	A	140	ASP	2.2
2	H	175	ILE	2.2
1	G	166	ILE	2.2
1	J	316	ASP	2.2
2	B	174	ILE	2.2
1	J	526	PRO	2.2
1	J	568	THR	2.2
1	A	328	LEU	2.2
2	B	108	GLY	2.2
2	B	116	VAL	2.2
1	D	140	ASP	2.2
1	J	11	GLY	2.2
1	J	73	SER	2.2
3	I	582	ASP	2.2
1	A	164	GLY	2.2
1	G	224	PHE	2.2
1	G	258	PRO	2.2
2	B	110	PRO	2.2
1	D	16	ARG	2.2
1	A	615	LEU	2.1
1	J	447	TYR	2.1
1	G	152	ASN	2.1
1	A	447	TYR	2.1
1	J	26	LEU	2.1
1	D	724	PHE	2.1
1	G	440	PHE	2.1
1	A	18	ARG	2.1
2	H	441	ARG	2.1
1	G	225	GLU	2.1
1	J	229	SER	2.1
1	D	344	LYS	2.1
1	G	240	LEU	2.1
1	J	287	ARG	2.1
1	A	341	GLU	2.1
1	D	310	ASN	2.1
1	D	631	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
1	J	240	LEU	2.1
1	G	78	ARG	2.1
1	A	460	THR	2.1
1	D	315	LEU	2.1
1	A	215	PRO	2.1
3	I	612	GLU	2.1
1	A	272	VAL	2.1
1	J	74	VAL	2.1
2	H	316	GLY	2.1
3	C	681	LEU	2.1
1	A	723	PHE	2.1
1	A	317	ASN	2.1
2	E	111	LEU	2.1
2	H	397	HIS	2.1
1	J	175	VAL	2.0
2	H	398	LYS	2.0
1	A	333	GLU	2.0
1	G	68	VAL	2.0
1	G	478	ALA	2.0
1	A	23	TYR	2.0
1	J	245	LYS	2.0
1	J	78	ARG	2.0
3	L	600	ILE	2.0
1	A	142	ASP	2.0
1	G	443	LEU	2.0
1	A	235	GLY	2.0

## 6.2 Non-standard residues in protein, DNA, RNA chains [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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
4	M3L	R	7	12/13	0.96	0.25	-	50,57,84,84	0
4	M3L	T	7	12/13	0.96	0.26	-	67,74,83,87	0
4	M3L	Q	7	12/13	0.97	0.23	-	55,63,83,84	0
4	M3L	S	7	12/13	0.96	0.27	-	60,71,87,89	0

## 6.3 Carbohydrates [i](#)

There are no carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
6	74D	G	809	37/37	0.96	0.31	1.19	61,69,76,77	0
6	74D	A	809	37/37	0.94	0.29	0.79	62,78,86,91	0
6	74D	D	809	37/37	0.95	0.30	0.68	61,70,89,93	0
5	ZN	J	807	1/1	0.98	0.18	0.57	71,71,71,71	0
6	74D	J	809	37/37	0.95	0.27	0.41	65,77,87,89	0
5	ZN	G	808	1/1	1.00	0.17	-0.05	49,49,49,49	0
5	ZN	D	807	1/1	0.99	0.17	-0.15	66,66,66,66	0
5	ZN	D	808	1/1	0.99	0.17	-0.19	56,56,56,56	0
5	ZN	G	807	1/1	0.99	0.17	-0.35	59,59,59,59	0
5	ZN	J	804	1/1	0.99	0.13	-0.51	94,94,94,94	0
5	ZN	J	808	1/1	1.00	0.16	-0.55	49,49,49,49	0
5	ZN	G	806	1/1	0.99	0.16	-0.57	61,61,61,61	0
5	ZN	A	805	1/1	0.99	0.15	-0.60	66,66,66,66	0
5	ZN	G	804	1/1	0.99	0.14	-0.61	70,70,70,70	0
5	ZN	D	806	1/1	0.99	0.15	-0.63	58,58,58,58	0
5	ZN	D	801	1/1	0.99	0.15	-0.70	68,68,68,68	0
5	ZN	D	804	1/1	1.00	0.13	-0.71	61,61,61,61	0
5	ZN	J	801	1/1	0.99	0.15	-0.76	68,68,68,68	0
5	ZN	J	806	1/1	0.99	0.17	-0.77	75,75,75,75	0
5	ZN	A	808	1/1	1.00	0.16	-0.83	55,55,55,55	0
5	ZN	A	804	1/1	0.99	0.14	-0.84	56,56,56,56	0
5	ZN	G	803	1/1	0.98	0.13	-0.85	73,73,73,73	0
5	ZN	G	801	1/1	0.99	0.14	-0.86	71,71,71,71	0
5	ZN	J	803	1/1	0.99	0.12	-0.87	89,89,89,89	0
5	ZN	A	802	1/1	0.96	0.11	-0.88	132,132,132,132	0
5	ZN	D	803	1/1	1.00	0.13	-0.93	59,59,59,59	0
5	ZN	D	805	1/1	0.99	0.13	-0.94	65,65,65,65	0
5	ZN	A	803	1/1	1.00	0.13	-1.05	65,65,65,65	0
5	ZN	J	805	1/1	0.99	0.11	-1.06	80,80,80,80	0
5	ZN	G	805	1/1	0.99	0.13	-1.14	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
5	ZN	A	801	1/1	0.99	0.13	-1.20	70,70,70,70	0
5	ZN	D	802	1/1	0.99	0.11	-1.27	84,84,84,84	0
5	ZN	J	802	1/1	0.94	0.10	-1.48	147,147,147,147	0
5	ZN	A	806	1/1	0.99	0.13	-1.55	53,53,53,53	0
5	ZN	A	807	1/1	0.99	0.15	-1.59	55,55,55,55	0
5	ZN	G	802	1/1	0.98	0.12	-2.25	146,146,146,146	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.