



# Full wwPDB X-ray Structure Validation Report ⓘ

Jan 31, 2016 – 07:21 PM GMT

PDB ID : 1F30  
Title : THE STRUCTURAL BASIS FOR DNA PROTECTION BY E. COLI DPS  
PROTEIN  
Authors : Luo, J.; Liu, D.; White, M.A.; Fox, R.O.  
Deposited on : 2000-05-31  
Resolution : 2.85 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 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
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) : trunk26865

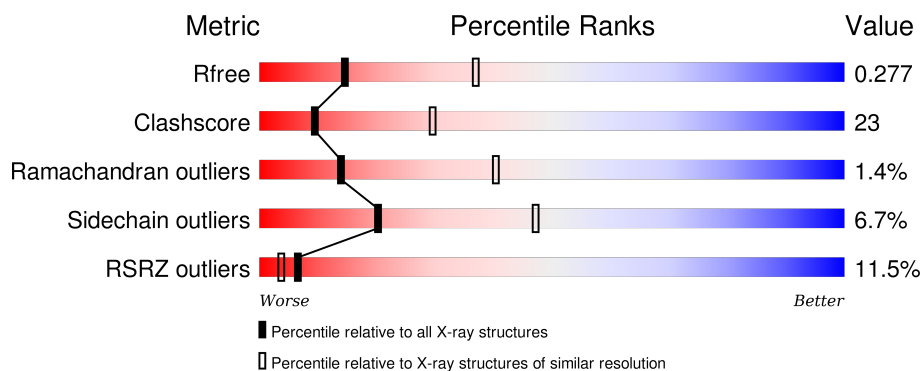
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 2.85 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.





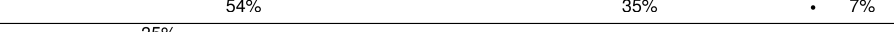

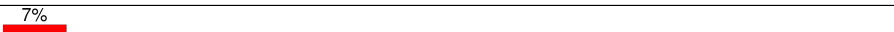
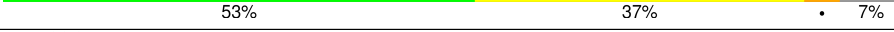

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	91344	2228 (2.90-2.82)
Clashscore	102246	2499 (2.90-2.82)
Ramachandran outliers	100387	2439 (2.90-2.82)
Sidechain outliers	100360	2442 (2.90-2.82)
RSRZ outliers	91569	2236 (2.90-2.82)

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	167	<div> <div>54%</div> <div>35%</div> <div>7%</div> </div>
1	B	167	<div> <div>54%</div> <div>34%</div> <div>5%</div> <div>7%</div> </div>
1	C	167	<div> <div>61%</div> <div>30%</div> <div>7%</div> </div>
1	D	167	<div> <div>61%</div> <div>29%</div> <div>7%</div> </div>
1	E	167	<div> <div>57%</div> <div>31%</div> <div>5%</div> <div>7%</div> </div>

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Mol	Chain	Length	Quality of chain
1	F	167	
1	G	167	
1	H	167	
1	I	167	
1	J	167	
1	K	167	
1	L	167	

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
3	TRS	E	603	-	-	-	X
3	TRS	I	607	-	-	-	X

## 2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 15479 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 DNA PROTECTION DURING STARVATION PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	B	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	C	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	D	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	E	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	F	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	G	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	H	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	I	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	J	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	K	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			
1	L	156	Total	C	N	O	S	0	0	0
			1236	776	216	241	3			

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

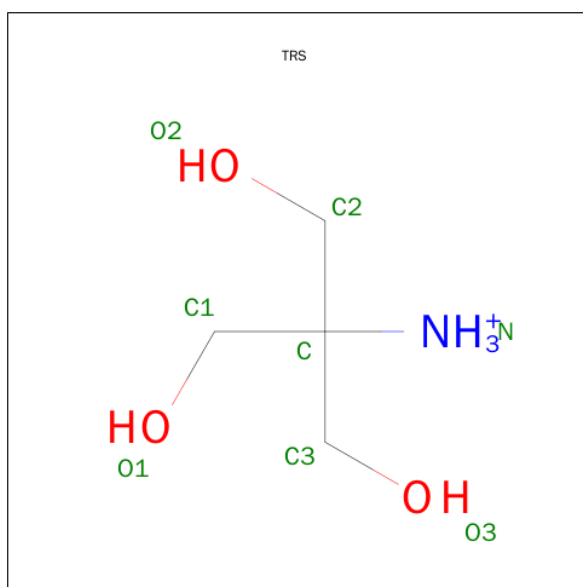
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	G	1	Total	Zn	0	0
			1	1		
2	J	1	Total	Zn	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	D	1	Total	Zn	0	0
			1	1		
2	K	1	Total	Zn	0	0
			1	1		
2	E	1	Total	Zn	0	0
			1	1		
2	H	1	Total	Zn	0	0
			1	1		
2	B	1	Total	Zn	0	0
			1	1		
2	I	1	Total	Zn	0	0
			1	1		
2	C	1	Total	Zn	0	0
			1	1		
2	A	1	Total	Zn	0	0
			1	1		
2	L	1	Total	Zn	0	0
			1	1		
2	F	1	Total	Zn	0	0
			1	1		

- Molecule 3 is 2-AMINO-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (three-letter code: TRS) (formula: C<sub>4</sub>H<sub>12</sub>NO<sub>3</sub>).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	C	N	O	0	0
			8	4	1	3		

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total	C	N	O	0	0
			8	4	1	3		
3	E	1	Total	C	N	O	0	0
			8	4	1	3		
3	C	1	Total	C	N	O	0	0
			8	4	1	3		
3	F	1	Total	C	N	O	0	0
			8	4	1	3		
3	D	1	Total	C	N	O	0	0
			8	4	1	3		
3	I	1	Total	C	N	O	0	0
			8	4	1	3		
3	L	1	Total	C	N	O	0	0
			8	4	1	3		
3	L	1	Total	C	N	O	0	0
			8	4	1	3		
3	K	1	Total	C	N	O	0	0
			8	4	1	3		
3	J	1	Total	C	N	O	0	0
			8	4	1	3		
3	J	1	Total	C	N	O	0	0
			8	4	1	3		

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	57	Total	O	0	0
			57	57		
4	B	61	Total	O	0	0
			61	61		
4	C	68	Total	O	0	0
			68	68		
4	D	70	Total	O	0	0
			70	70		
4	E	73	Total	O	0	0
			73	73		
4	F	88	Total	O	0	0
			88	88		
4	G	17	Total	O	0	0
			17	17		
4	H	13	Total	O	0	0
			13	13		

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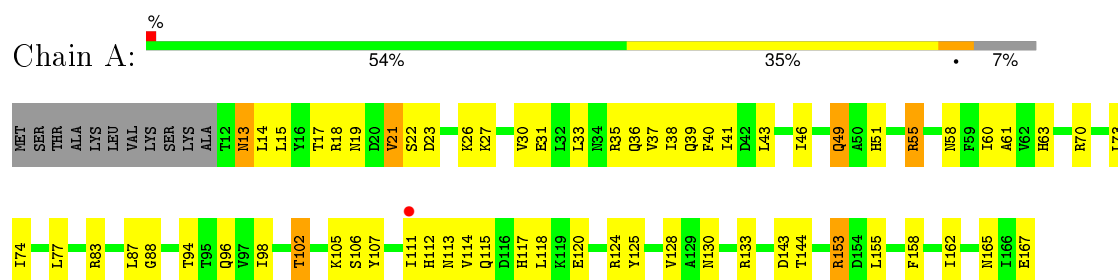
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	I	28	Total 28	O 28	0	0
4	J	25	Total 25	O 25	0	0
4	K	25	Total 25	O 25	0	0
4	L	14	Total 14	O 14	0	0

### 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 errors 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.

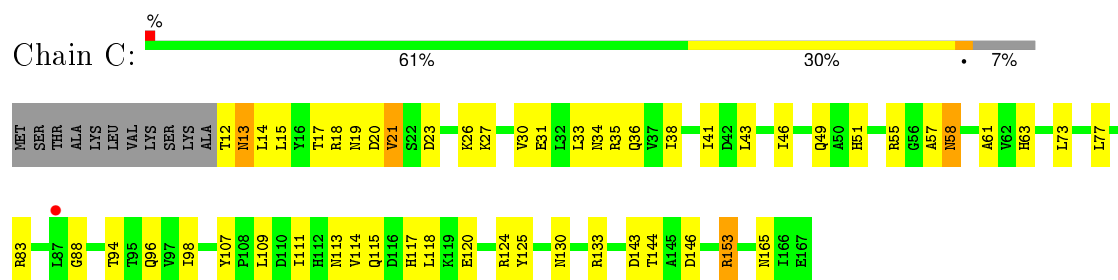
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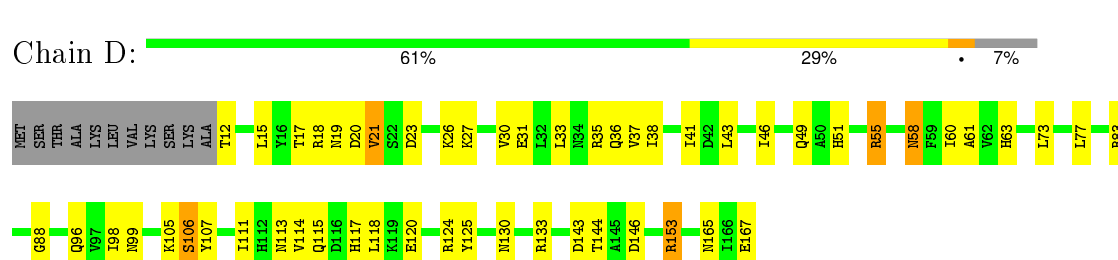
#### • Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN



#### • Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

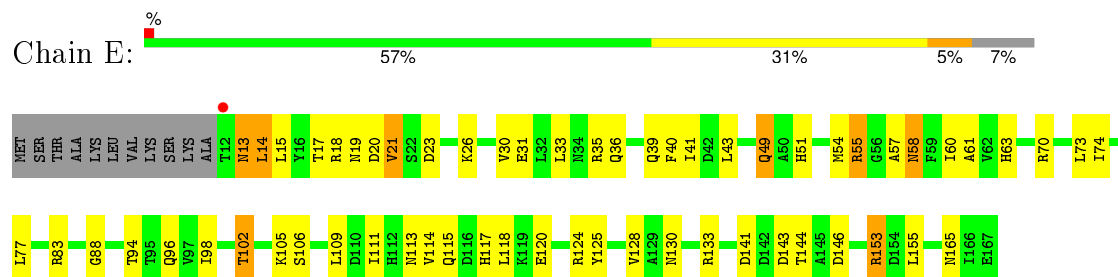


#### • Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

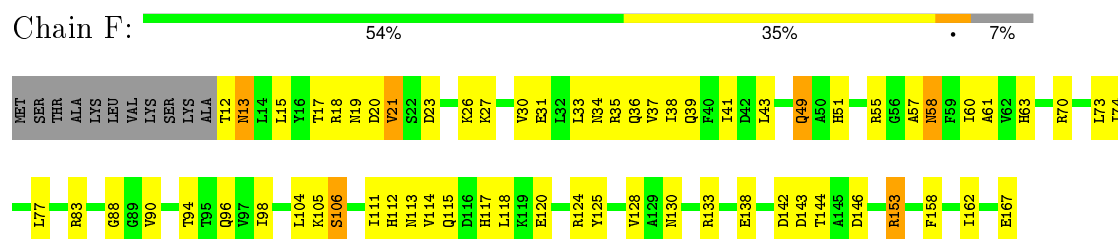




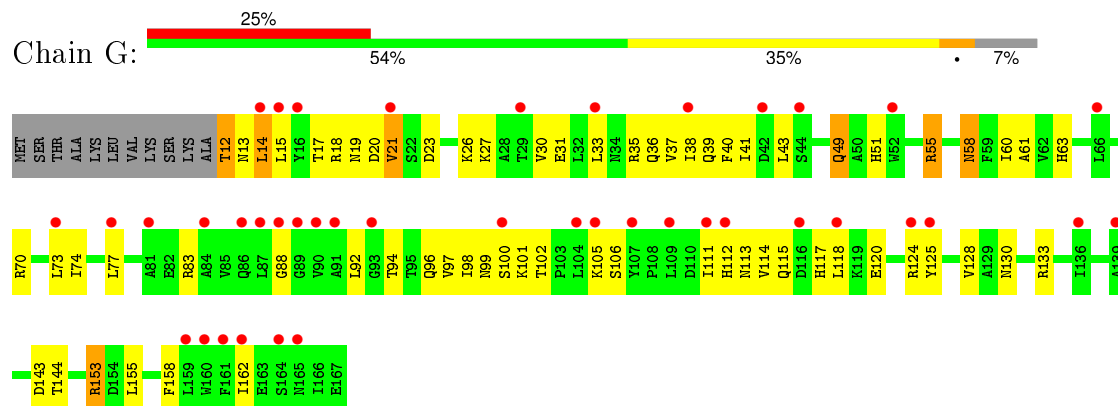
- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN



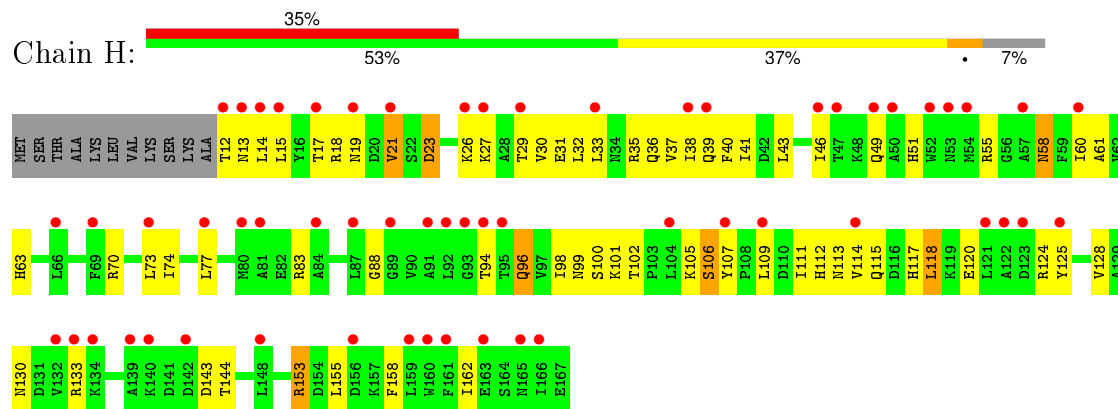
- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN



- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

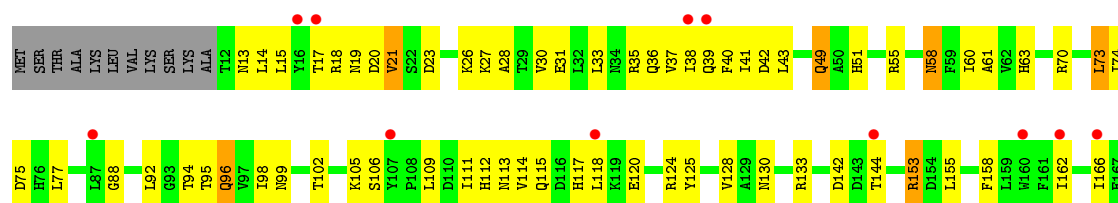


- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

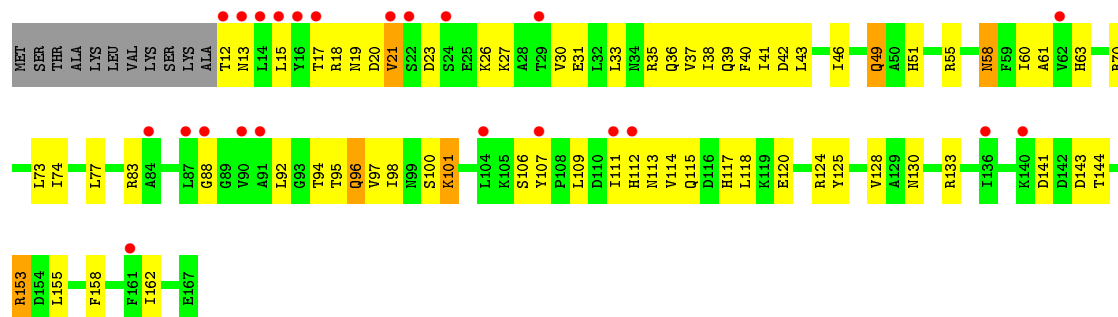


- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

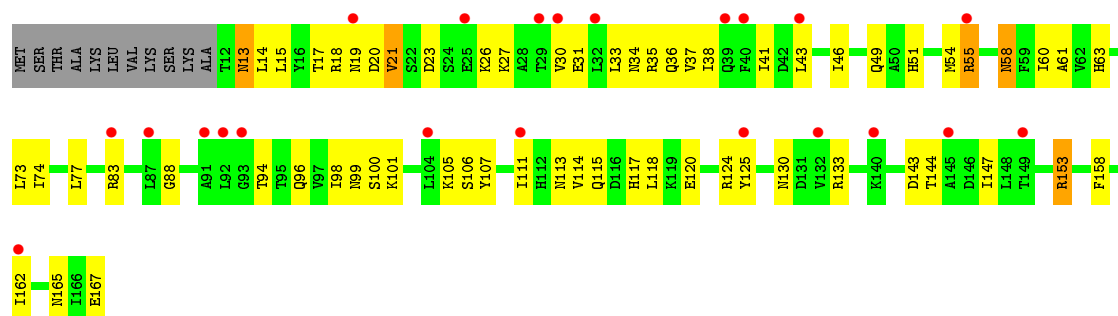




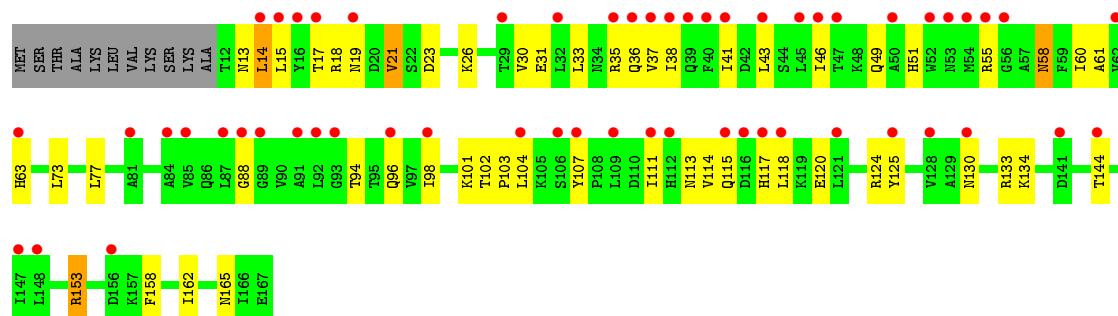
- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN



- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN



- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN



## 4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	117.77Å 140.78Å 268.42Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.47 – 2.85 85.61 – 2.84	Depositor EDS
% Data completeness (in resolution range)	96.1 (29.47-2.85) 95.4 (85.61-2.84)	Depositor EDS
$R_{merge}$	0.07	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	3.60 (at 2.86Å)	Xtriage
Refinement program	CNS 1.0	Depositor
R, $R_{free}$	0.232 , 0.272 0.240 , 0.277	Depositor DCC
$R_{free}$ test set	5071 reflections (10.07%)	DCC
Wilson B-factor (Å <sup>2</sup> )	52.4	Xtriage
Anisotropy	0.566	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.34 , 73.8	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.46$ , $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	0 of 51815 reflections	Xtriage
$F_o, F_c$ correlation	0.91	EDS
Total number of atoms	15479	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	63.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.02% of the height of the origin peak. No significant pseudotranslation is detected.*

<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, 0.375 respectively for untwinned datasets, and 0.333, 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, TRS

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	0/1254	0.60	1/1698 (0.1%)
1	B	0.39	0/1254	0.77	3/1698 (0.2%)
1	C	0.39	0/1254	0.59	0/1698
1	D	0.40	0/1254	0.61	1/1698 (0.1%)
1	E	0.39	0/1254	0.77	3/1698 (0.2%)
1	F	0.39	0/1254	0.60	0/1698
1	G	0.32	0/1254	0.57	1/1698 (0.1%)
1	H	0.34	0/1254	0.56	0/1698
1	I	0.34	0/1254	0.58	0/1698
1	J	0.33	0/1254	0.57	0/1698
1	K	0.33	0/1254	0.74	3/1698 (0.2%)
1	L	0.32	0/1254	0.57	0/1698
All	All	0.36	0/15048	0.63	12/20376 (0.1%)

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	55	ARG	NE-CZ-NH1	14.28	127.44	120.30
1	E	55	ARG	NE-CZ-NH2	-14.28	113.16	120.30
1	K	55	ARG	NE-CZ-NH2	-14.11	113.25	120.30
1	B	55	ARG	NE-CZ-NH2	-14.11	113.25	120.30
1	B	55	ARG	NE-CZ-NH1	13.52	127.06	120.30
1	K	55	ARG	NE-CZ-NH1	13.40	127.00	120.30
1	E	55	ARG	CD-NE-CZ	6.57	132.79	123.60
1	B	55	ARG	CD-NE-CZ	6.51	132.71	123.60
1	K	55	ARG	CD-NE-CZ	6.35	132.49	123.60
1	D	55	ARG	NE-CZ-NH1	-5.29	117.65	120.30
1	A	55	ARG	NE-CZ-NH1	-5.28	117.66	120.30
1	G	55	ARG	NE-CZ-NH1	-5.03	117.79	120.30

There are no chirality outliers.

There are no planarity outliers.

## 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	1236	0	1232	60	0
1	B	1236	0	1232	68	0
1	C	1236	0	1232	52	0
1	D	1236	0	1232	55	0
1	E	1236	0	1232	72	0
1	F	1236	0	1232	73	0
1	G	1236	0	1232	68	0
1	H	1236	0	1232	70	0
1	I	1236	0	1232	69	0
1	J	1236	0	1232	69	0
1	K	1236	0	1232	58	0
1	L	1236	0	1232	47	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
2	E	1	0	0	0	0
2	F	1	0	0	0	0
2	G	1	0	0	0	0
2	H	1	0	0	0	0
2	I	1	0	0	0	0
2	J	1	0	0	0	0
2	K	1	0	0	0	0
2	L	1	0	0	0	0
3	A	16	0	24	3	0
3	C	8	0	12	0	0
3	D	8	0	12	2	0
3	E	8	0	12	3	0
3	F	8	0	12	1	0
3	I	8	0	12	0	0
3	J	16	0	24	1	0
3	K	8	0	12	0	0
3	L	16	0	24	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	57	0	0	3	0
4	B	61	0	0	6	0
4	C	68	0	0	3	0
4	D	70	0	0	3	0
4	E	73	0	0	6	0
4	F	88	0	0	8	0
4	G	17	0	0	3	0
4	H	13	0	0	1	0
4	I	28	0	0	3	0
4	J	25	0	0	0	0
4	K	25	0	0	2	0
4	L	14	0	0	2	0
All	All	15479	0	14928	674	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 23.

All (674) 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:D:130:ASN:ND2	1:D:133:ARG:HH22	1.62	0.96
1:H:12:THR:HA	1:H:27:LYS:HD2	1.49	0.95
1:E:130:ASN:ND2	1:E:133:ARG:HH22	1.65	0.92
1:I:75:ASP:HB3	4:I:615:HOH:O	1.70	0.92
1:B:130:ASN:ND2	1:B:133:ARG:HH22	1.68	0.91
1:C:130:ASN:ND2	1:C:133:ARG:HH22	1.67	0.91
1:H:130:ASN:ND2	1:H:133:ARG:HH22	1.69	0.91
1:F:130:ASN:ND2	1:F:133:ARG:HH22	1.69	0.90
1:A:130:ASN:ND2	1:A:133:ARG:HH22	1.71	0.87
1:G:41:ILE:HG12	1:G:77:LEU:HD11	1.55	0.86
1:E:98:ILE:O	1:E:102:THR:HG22	1.75	0.86
1:G:130:ASN:ND2	1:G:133:ARG:HH22	1.71	0.86
1:C:130:ASN:HD22	1:C:133:ARG:HH22	1.23	0.86
1:K:130:ASN:ND2	1:K:133:ARG:HH22	1.74	0.85
1:L:41:ILE:HG12	1:L:77:LEU:HD11	1.57	0.85
1:J:130:ASN:ND2	1:J:133:ARG:HH22	1.72	0.85
1:L:130:ASN:ND2	1:L:133:ARG:HH22	1.74	0.85
1:H:130:ASN:HD22	1:H:133:ARG:HH22	1.23	0.84
1:E:130:ASN:HD22	1:E:133:ARG:HH22	1.23	0.84
1:K:41:ILE:HG12	1:K:77:LEU:HD11	1.60	0.83
1:J:41:ILE:HG12	1:J:77:LEU:HD11	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:146:ASP:OD1	3:E:603:TRS:H22	1.78	0.83
1:D:130:ASN:HD22	1:D:133:ARG:HH22	1.19	0.83
1:F:41:ILE:HG12	1:F:77:LEU:HD11	1.62	0.82
1:I:130:ASN:ND2	1:I:133:ARG:HH22	1.77	0.82
1:H:41:ILE:HG12	1:H:77:LEU:HD11	1.61	0.81
1:B:130:ASN:HD22	1:B:133:ARG:HH22	1.26	0.81
1:A:130:ASN:HD22	1:A:133:ARG:HH22	1.26	0.81
1:G:130:ASN:HD22	1:G:133:ARG:HH22	1.25	0.81
1:F:130:ASN:HD22	1:F:133:ARG:HH22	1.26	0.81
1:J:100:SER:O	1:J:101:LYS:HG2	1.81	0.81
1:E:41:ILE:HG12	1:E:77:LEU:HD11	1.62	0.80
1:I:41:ILE:HG12	1:I:77:LEU:HD11	1.64	0.80
1:C:41:ILE:HG12	1:C:77:LEU:HD11	1.63	0.80
1:D:41:ILE:HG12	1:D:77:LEU:HD11	1.63	0.79
1:F:113:ASN:ND2	1:F:115:GLN:HB2	1.98	0.79
1:B:41:ILE:HG12	1:B:77:LEU:HD11	1.63	0.79
1:J:130:ASN:HD22	1:J:133:ARG:HH22	1.28	0.79
1:B:21:VAL:O	1:B:26:LYS:HE3	1.83	0.79
1:A:41:ILE:HG12	1:A:77:LEU:HD11	1.64	0.78
1:J:113:ASN:ND2	1:J:115:GLN:HB2	1.99	0.78
1:H:113:ASN:ND2	1:H:115:GLN:HB2	1.99	0.78
1:L:13:ASN:O	1:L:14:LEU:HB2	1.83	0.78
1:K:130:ASN:HD22	1:K:133:ARG:HH22	1.31	0.77
1:L:130:ASN:HD22	1:L:133:ARG:HH22	1.28	0.77
1:I:130:ASN:HD22	1:I:133:ARG:HH22	1.33	0.77
1:D:113:ASN:ND2	1:D:115:GLN:HB2	2.00	0.77
1:L:113:ASN:ND2	1:L:115:GLN:HB2	1.98	0.77
1:C:21:VAL:O	1:C:26:LYS:HE3	1.84	0.77
1:B:113:ASN:ND2	1:B:115:GLN:HB2	1.99	0.77
1:I:113:ASN:ND2	1:I:115:GLN:HB2	2.01	0.76
1:F:21:VAL:O	1:F:26:LYS:HE3	1.86	0.76
1:G:21:VAL:O	1:G:26:LYS:HE3	1.85	0.76
1:E:21:VAL:O	1:E:26:LYS:HE3	1.86	0.75
1:G:113:ASN:ND2	1:G:115:GLN:HB2	2.00	0.75
1:C:113:ASN:ND2	1:C:115:GLN:HB2	2.01	0.75
1:F:113:ASN:HD21	1:F:115:GLN:HB2	1.52	0.75
1:A:113:ASN:ND2	1:A:115:GLN:HB2	2.01	0.75
1:I:70:ARG:HH11	1:J:74:ILE:HD13	1.51	0.74
1:E:113:ASN:ND2	1:E:115:GLN:HB2	2.01	0.74
1:K:113:ASN:ND2	1:K:115:GLN:HB2	2.01	0.74
1:K:21:VAL:O	1:K:26:LYS:HE3	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:12:THR:HA	1:H:27:LYS:CD	2.18	0.74
1:G:99:ASN:HB3	1:H:99:ASN:HD22	1.50	0.73
1:H:13:ASN:H	1:H:27:LYS:NZ	1.86	0.73
1:B:17:THR:HG22	4:B:257:HOH:O	1.89	0.73
1:G:130:ASN:CG	1:K:20:ASP:HB2	2.09	0.73
1:A:74:ILE:HD13	1:B:70:ARG:HH11	1.53	0.73
1:B:130:ASN:CG	1:C:20:ASP:HB2	2.09	0.73
1:D:115:GLN:HG2	4:D:496:HOH:O	1.89	0.72
1:L:113:ASN:HD21	1:L:115:GLN:HB2	1.54	0.72
1:J:21:VAL:O	1:J:26:LYS:HE3	1.89	0.72
1:E:113:ASN:HD21	1:E:115:GLN:HB2	1.55	0.72
1:A:21:VAL:O	1:A:26:LYS:HE3	1.90	0.71
1:L:21:VAL:O	1:L:26:LYS:HE3	1.89	0.71
1:C:130:ASN:ND2	1:E:20:ASP:H	1.87	0.71
1:D:113:ASN:HD21	1:D:115:GLN:HB2	1.55	0.71
1:A:70:ARG:HH11	1:B:74:ILE:HD13	1.54	0.71
1:G:70:ARG:HH11	1:H:74:ILE:HD13	1.56	0.71
1:H:113:ASN:HD21	1:H:115:GLN:HB2	1.56	0.71
1:D:18:ARG:HG3	1:D:18:ARG:HH21	1.56	0.71
1:D:21:VAL:O	1:D:26:LYS:HE3	1.90	0.71
1:H:133:ARG:HH11	1:H:133:ARG:HB2	1.56	0.70
1:I:21:VAL:O	1:I:26:LYS:HE3	1.91	0.70
1:I:113:ASN:HD21	1:I:115:GLN:HB2	1.56	0.70
1:H:21:VAL:O	1:H:26:LYS:HE3	1.92	0.70
1:F:133:ARG:HH11	1:F:133:ARG:HB2	1.57	0.70
1:K:113:ASN:HD21	1:K:115:GLN:HB2	1.56	0.70
1:J:113:ASN:HD21	1:J:115:GLN:HB2	1.55	0.70
1:G:97:VAL:O	1:G:101:LYS:HB2	1.91	0.70
1:J:133:ARG:HB2	1:J:133:ARG:HH11	1.55	0.69
1:B:113:ASN:HD21	1:B:115:GLN:HB2	1.57	0.69
1:I:74:ILE:HD13	1:J:70:ARG:HH11	1.57	0.69
1:A:113:ASN:HD21	1:A:115:GLN:HB2	1.58	0.69
1:D:130:ASN:CG	1:F:20:ASP:HB2	2.13	0.69
1:C:130:ASN:CG	1:E:20:ASP:HB2	2.14	0.69
1:G:74:ILE:HD13	1:H:70:ARG:HH11	1.58	0.68
1:H:12:THR:CA	1:H:27:LYS:HD2	2.23	0.68
1:G:113:ASN:HD21	1:G:115:GLN:HB2	1.56	0.68
1:L:133:ARG:HH11	1:L:133:ARG:HB2	1.57	0.68
1:C:113:ASN:HD21	1:C:115:GLN:HB2	1.56	0.68
1:A:18:ARG:HG3	1:A:18:ARG:HH21	1.57	0.68
1:G:133:ARG:HB2	1:G:133:ARG:HH11	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:33:LEU:HD21	1:H:144:THR:HG23	1.76	0.67
1:B:18:ARG:HH21	1:B:18:ARG:HG3	1.60	0.67
1:D:12:THR:O	1:D:27:LYS:NZ	2.28	0.67
1:K:18:ARG:HH21	1:K:18:ARG:HG3	1.60	0.67
1:A:133:ARG:HB2	1:A:133:ARG:HH11	1.58	0.66
1:B:98:ILE:O	1:B:102:THR:HG22	1.95	0.66
1:D:133:ARG:HH11	1:D:133:ARG:HB2	1.60	0.66
1:F:57:ALA:HB3	4:F:191:HOH:O	1.96	0.66
1:J:18:ARG:HH21	1:J:18:ARG:HG3	1.61	0.66
1:E:133:ARG:HB2	1:E:133:ARG:HH11	1.59	0.66
1:G:130:ASN:ND2	1:K:20:ASP:H	1.94	0.66
1:K:133:ARG:HH11	1:K:133:ARG:HB2	1.60	0.66
1:G:12:THR:C	1:G:13:ASN:HD22	1.98	0.65
1:I:18:ARG:HH21	1:I:18:ARG:HG3	1.60	0.65
1:B:20:ASP:HB2	1:E:130:ASN:CG	2.16	0.65
1:F:35:ARG:NH1	4:F:435:HOH:O	2.29	0.65
1:D:130:ASN:ND2	1:F:20:ASP:H	1.93	0.65
1:K:14:LEU:HD21	1:K:27:LYS:HG2	1.79	0.65
1:H:18:ARG:HH21	1:H:18:ARG:HG3	1.61	0.64
1:E:70:ARG:HH11	1:F:74:ILE:HD13	1.62	0.64
1:I:133:ARG:HB2	1:I:133:ARG:HH11	1.62	0.64
1:D:51:HIS:CE1	1:D:63:HIS:CE1	2.86	0.64
1:F:12:THR:N	4:F:500:HOH:O	2.30	0.64
1:C:18:ARG:HH21	1:C:18:ARG:HG3	1.63	0.64
1:L:18:ARG:HG3	1:L:18:ARG:HH21	1.61	0.63
1:I:20:ASP:H	1:K:130:ASN:ND2	1.96	0.63
1:G:14:LEU:HD11	1:G:27:LYS:HG3	1.79	0.63
1:G:18:ARG:HG3	1:G:18:ARG:HH21	1.64	0.63
1:I:20:ASP:HB2	1:K:130:ASN:CG	2.19	0.62
1:J:20:ASP:H	1:L:130:ASN:ND2	1.97	0.62
1:F:33:LEU:HD21	1:F:144:THR:HG23	1.81	0.62
1:C:133:ARG:HH11	1:C:133:ARG:HB2	1.63	0.62
1:D:130:ASN:ND2	1:D:133:ARG:NH2	2.42	0.62
1:G:33:LEU:HD21	1:G:144:THR:HG23	1.80	0.62
1:E:74:ILE:HD13	1:F:70:ARG:HH11	1.65	0.62
1:L:33:LEU:HD21	1:L:144:THR:HG23	1.80	0.62
1:B:130:ASN:ND2	1:C:20:ASP:HB2	2.16	0.61
1:H:14:LEU:HD21	1:H:27:LYS:HG2	1.82	0.61
1:B:133:ARG:HH11	1:B:133:ARG:HB2	1.64	0.61
1:A:15:LEU:HD13	1:A:88:GLY:O	2.01	0.61
1:E:18:ARG:HG3	1:E:18:ARG:HH21	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:26:LYS:O	1:C:30:VAL:HG23	2.01	0.61
1:H:133:ARG:NH1	1:H:133:ARG:HB2	2.16	0.60
1:J:133:ARG:NH1	1:J:133:ARG:HB2	2.15	0.60
1:B:130:ASN:ND2	1:C:20:ASP:H	1.98	0.60
1:A:133:ARG:NH1	1:A:133:ARG:HB2	2.16	0.60
1:C:57:ALA:HB3	4:C:634:HOH:O	2.00	0.60
1:C:130:ASN:ND2	1:C:133:ARG:NH2	2.46	0.60
1:J:20:ASP:HB2	1:L:130:ASN:CG	2.22	0.60
1:E:70:ARG:HD3	4:E:648:HOH:O	2.02	0.60
1:L:133:ARG:HB2	1:L:133:ARG:NH1	2.17	0.60
1:K:133:ARG:HB2	1:K:133:ARG:NH1	2.16	0.60
1:B:33:LEU:HD21	1:B:144:THR:HG23	1.82	0.60
1:C:130:ASN:HD21	1:E:20:ASP:H	1.50	0.59
3:A:601:TRS:H31	1:D:167:GLU:OE1	2.03	0.59
1:E:74:ILE:HD12	4:E:643:HOH:O	2.02	0.59
1:I:142:ASP:HB2	4:I:626:HOH:O	2.03	0.59
1:I:33:LEU:HD21	1:I:144:THR:HG23	1.85	0.59
1:C:12:THR:O	1:C:13:ASN:HB2	2.02	0.59
1:F:18:ARG:HH21	1:F:18:ARG:HG3	1.67	0.59
1:C:153:ARG:HG3	4:C:648:HOH:O	2.03	0.59
1:G:55:ARG:HD3	4:G:204:HOH:O	2.02	0.59
1:J:33:LEU:HD21	1:J:144:THR:HG23	1.84	0.59
1:F:133:ARG:NH1	1:F:133:ARG:HB2	2.17	0.58
1:J:97:VAL:O	1:J:101:LYS:HB2	2.04	0.58
1:F:90:VAL:HG22	4:F:455:HOH:O	2.03	0.58
1:K:100:SER:O	1:K:101:LYS:HG2	2.04	0.58
1:F:130:ASN:ND2	1:F:133:ARG:NH2	2.49	0.58
1:D:33:LEU:HD21	1:D:144:THR:HG23	1.85	0.58
1:L:26:LYS:O	1:L:30:VAL:HG23	2.04	0.57
1:K:33:LEU:HD21	1:K:144:THR:HG23	1.86	0.57
1:A:51:HIS:CE1	1:A:63:HIS:CE1	2.92	0.57
1:C:133:ARG:HB2	1:C:133:ARG:NH1	2.19	0.57
1:F:12:THR:CG2	1:F:27:LYS:HD2	2.34	0.57
1:A:74:ILE:CD1	1:B:70:ARG:HH11	2.17	0.57
1:A:33:LEU:HD21	1:A:144:THR:HG23	1.87	0.57
1:D:133:ARG:HB2	1:D:133:ARG:NH1	2.18	0.57
1:B:130:ASN:ND2	1:B:133:ARG:NH2	2.47	0.57
1:B:130:ASN:HD21	1:C:20:ASP:H	1.51	0.57
1:E:51:HIS:CE1	1:E:63:HIS:CE1	2.92	0.57
1:E:33:LEU:HD21	1:E:144:THR:HG23	1.87	0.56
1:B:20:ASP:H	1:E:130:ASN:ND2	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:165:ASN:HD21	1:E:60:ILE:H	1.53	0.56
1:G:133:ARG:HB2	1:G:133:ARG:NH1	2.19	0.56
1:E:133:ARG:NH1	1:E:133:ARG:HB2	2.20	0.56
1:F:153:ARG:HG3	4:F:360:HOH:O	2.06	0.56
1:H:13:ASN:H	1:H:27:LYS:HZ2	1.52	0.55
1:I:70:ARG:HH11	1:J:74:ILE:CD1	2.18	0.55
1:K:26:LYS:O	1:K:30:VAL:HG23	2.06	0.55
1:I:133:ARG:NH1	1:I:133:ARG:HB2	2.21	0.55
1:L:13:ASN:O	1:L:14:LEU:CB	2.53	0.55
1:G:51:HIS:CE1	1:G:63:HIS:CE1	2.94	0.55
1:B:112:HIS:HB2	4:B:226:HOH:O	2.05	0.55
1:C:130:ASN:HD22	1:C:133:ARG:NH2	2.01	0.55
1:H:51:HIS:CE1	1:H:63:HIS:CE1	2.94	0.55
1:L:134:LYS:HA	4:L:617:HOH:O	2.07	0.55
1:G:99:ASN:CB	1:H:99:ASN:HD22	2.20	0.55
1:I:26:LYS:O	1:I:30:VAL:HG23	2.07	0.55
1:B:153:ARG:HG3	4:B:205:HOH:O	2.07	0.55
1:J:51:HIS:CE1	1:J:63:HIS:CE1	2.95	0.54
1:C:35:ARG:HG3	1:C:35:ARG:HH21	1.72	0.54
1:G:26:LYS:O	1:G:30:VAL:HG23	2.08	0.54
1:A:18:ARG:HG3	1:A:18:ARG:NH2	2.23	0.54
1:C:33:LEU:HD21	1:C:144:THR:HG23	1.88	0.54
1:A:74:ILE:HD12	4:A:611:HOH:O	2.08	0.54
1:L:51:HIS:CE1	1:L:63:HIS:CE1	2.96	0.54
3:D:606:TRS:H32	1:F:146:ASP:OD1	2.07	0.54
1:G:15:LEU:HD21	1:H:112:HIS:CE1	2.43	0.54
1:J:43:LEU:HD11	1:J:125:TYR:CD1	2.42	0.54
1:B:133:ARG:NH1	1:B:133:ARG:HB2	2.23	0.53
1:I:158:PHE:O	1:I:162:ILE:HG13	2.09	0.53
1:G:130:ASN:HD21	1:K:20:ASP:H	1.55	0.53
1:F:142:ASP:HB2	4:F:490:HOH:O	2.08	0.53
1:H:15:LEU:HD13	1:H:88:GLY:O	2.07	0.53
1:I:55:ARG:O	1:I:114:VAL:HG23	2.07	0.53
1:H:32:LEU:HD12	4:H:209:HOH:O	2.07	0.53
1:G:130:ASN:ND2	1:K:20:ASP:HB2	2.24	0.53
1:H:37:VAL:O	1:H:41:ILE:HG13	2.09	0.53
1:L:38:ILE:HG23	1:L:98:ILE:HD13	1.90	0.53
1:C:51:HIS:CE1	1:C:63:HIS:CE1	2.97	0.53
1:I:109:LEU:HD13	1:J:92:LEU:HD22	1.90	0.53
1:J:35:ARG:HH21	1:J:35:ARG:HG3	1.72	0.53
1:F:15:LEU:HD13	1:F:88:GLY:O	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:130:ASN:ND2	1:E:20:ASP:HB2	2.22	0.53
1:K:51:HIS:CE1	1:K:63:HIS:CE1	2.96	0.53
1:B:51:HIS:CE1	1:B:63:HIS:CE1	2.97	0.53
1:G:21:VAL:HA	4:G:218:HOH:O	2.08	0.53
1:F:37:VAL:O	1:F:41:ILE:HG13	2.09	0.53
1:E:49:GLN:HG3	1:F:94:THR:CG2	2.39	0.53
1:L:55:ARG:O	1:L:114:VAL:HG23	2.09	0.53
1:J:26:LYS:O	1:J:30:VAL:HG23	2.09	0.52
1:F:35:ARG:HH21	1:F:35:ARG:HG3	1.74	0.52
1:J:20:ASP:H	1:L:130:ASN:HD21	1.56	0.52
1:E:94:THR:HB	4:E:636:HOH:O	2.09	0.52
1:I:74:ILE:CD1	1:J:70:ARG:HH11	2.21	0.52
1:A:70:ARG:HH11	1:B:74:ILE:CD1	2.22	0.52
1:D:130:ASN:HD21	1:F:20:ASP:H	1.57	0.52
1:L:101:LYS:O	1:L:103:PRO:HD3	2.09	0.52
1:H:60:ILE:HG23	1:H:61:ALA:N	2.25	0.52
1:H:55:ARG:O	1:H:114:VAL:HG23	2.09	0.52
1:H:35:ARG:HG3	1:H:35:ARG:HH21	1.73	0.52
1:E:130:ASN:ND2	1:E:133:ARG:NH2	2.46	0.52
1:J:15:LEU:HD13	1:J:88:GLY:O	2.09	0.52
1:L:111:ILE:HG13	1:L:117:HIS:CE1	2.45	0.52
1:K:15:LEU:HD13	1:K:88:GLY:O	2.09	0.52
1:G:35:ARG:HG3	1:G:35:ARG:HH21	1.75	0.52
1:G:15:LEU:HD13	1:G:88:GLY:O	2.10	0.52
1:G:38:ILE:HG23	1:G:98:ILE:HD13	1.92	0.52
1:F:51:HIS:CE1	1:F:63:HIS:CE1	2.97	0.52
1:D:26:LYS:O	1:D:30:VAL:HG23	2.10	0.51
1:B:18:ARG:NH2	1:B:18:ARG:HG3	2.25	0.51
1:H:58:ASN:ND2	1:H:61:ALA:HB3	2.25	0.51
1:D:106:SER:HA	4:D:523:HOH:O	2.08	0.51
1:I:15:LEU:HD13	1:I:88:GLY:O	2.11	0.51
1:I:94:THR:CG2	1:J:49:GLN:HG3	2.40	0.51
1:I:51:HIS:CE1	1:I:63:HIS:CE1	2.97	0.51
1:L:15:LEU:HD13	1:L:88:GLY:O	2.10	0.51
1:F:26:LYS:O	1:F:30:VAL:HG23	2.10	0.51
1:K:111:ILE:HG13	1:K:117:HIS:CE1	2.45	0.51
1:E:36:GLN:NE2	1:E:36:GLN:HA	2.26	0.51
1:H:26:LYS:O	1:H:30:VAL:HG23	2.10	0.51
1:K:18:ARG:NH2	1:K:18:ARG:HG3	2.25	0.51
1:J:20:ASP:HB2	1:L:130:ASN:ND2	2.26	0.51
1:K:43:LEU:HD11	1:K:125:TYR:CD1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:43:LEU:HD11	1:E:125:TYR:CD1	2.46	0.51
1:J:38:ILE:HG23	1:J:98:ILE:HD13	1.93	0.51
3:J:611:TRS:H31	1:K:167:GLU:OE1	2.11	0.51
1:J:55:ARG:O	1:J:114:VAL:HG23	2.10	0.51
1:J:60:ILE:HG23	1:J:61:ALA:N	2.26	0.51
1:K:77:LEU:C	1:K:77:LEU:HD23	2.31	0.51
1:H:12:THR:HA	1:H:27:LYS:CE	2.41	0.51
1:G:112:HIS:CE1	1:H:15:LEU:HD21	2.46	0.51
1:A:94:THR:O	1:A:98:ILE:HG12	2.11	0.51
1:D:43:LEU:HD11	1:D:125:TYR:CD1	2.46	0.51
1:G:37:VAL:O	1:G:41:ILE:HG13	2.11	0.51
1:A:26:LYS:O	1:A:30:VAL:HG23	2.11	0.51
1:G:55:ARG:O	1:G:114:VAL:HG23	2.11	0.51
1:G:43:LEU:HD11	1:G:125:TYR:CD1	2.45	0.51
1:G:60:ILE:HG23	1:G:61:ALA:N	2.26	0.51
1:D:15:LEU:HD13	1:D:88:GLY:O	2.11	0.51
1:K:37:VAL:O	1:K:41:ILE:HG13	2.10	0.51
1:F:12:THR:HB	1:F:27:LYS:HD2	1.93	0.51
1:H:130:ASN:ND2	1:H:133:ARG:NH2	2.50	0.50
1:I:18:ARG:HG3	1:I:18:ARG:NH2	2.26	0.50
1:A:94:THR:CG2	1:B:49:GLN:HG3	2.41	0.50
1:I:58:ASN:ND2	1:I:61:ALA:HB3	2.26	0.50
1:E:94:THR:CG2	1:F:49:GLN:HG3	2.40	0.50
1:I:20:ASP:H	1:K:130:ASN:HD21	1.58	0.50
1:L:18:ARG:NH2	1:L:18:ARG:HG3	2.26	0.50
1:E:57:ALA:HA	4:E:676:HOH:O	2.11	0.50
1:C:15:LEU:HD13	1:C:88:GLY:O	2.11	0.50
1:A:106:SER:HA	4:B:261:HOH:O	2.11	0.50
1:E:36:GLN:HE21	1:E:36:GLN:HA	1.77	0.50
1:J:18:ARG:NH2	1:J:18:ARG:HG3	2.25	0.50
1:H:99:ASN:O	1:H:102:THR:HG22	2.12	0.50
1:H:158:PHE:O	1:H:162:ILE:HG13	2.12	0.50
1:J:36:GLN:NE2	1:J:36:GLN:HA	2.27	0.50
1:B:20:ASP:HB2	1:E:130:ASN:ND2	2.27	0.50
1:K:153:ARG:NH1	4:K:632:HOH:O	2.45	0.50
1:E:94:THR:HG23	1:F:49:GLN:HG3	1.93	0.49
1:A:167:GLU:OE1	3:A:601:TRS:H11	2.11	0.49
1:A:98:ILE:O	1:A:102:THR:HG22	2.12	0.49
1:D:111:ILE:HG13	1:D:117:HIS:CE1	2.47	0.49
1:D:153:ARG:HG2	1:D:153:ARG:NH1	2.27	0.49
1:K:35:ARG:HH21	1:K:35:ARG:HG3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:36:GLN:NE2	1:K:36:GLN:HA	2.26	0.49
1:G:158:PHE:O	1:G:162:ILE:HG13	2.12	0.49
1:L:37:VAL:O	1:L:41:ILE:HG13	2.13	0.49
1:B:26:LYS:O	1:B:30:VAL:HG23	2.12	0.49
1:I:94:THR:HG23	1:J:49:GLN:HG3	1.93	0.49
1:L:35:ARG:HH21	1:L:35:ARG:HG3	1.76	0.49
1:B:35:ARG:HH21	1:B:35:ARG:HG3	1.76	0.49
1:E:35:ARG:HH21	1:E:35:ARG:HG3	1.77	0.49
1:H:18:ARG:NH2	1:H:18:ARG:HG3	2.27	0.49
1:B:153:ARG:NH1	1:B:153:ARG:HG2	2.27	0.49
1:H:38:ILE:HG23	1:H:98:ILE:HD13	1.94	0.49
1:B:43:LEU:HD11	1:B:125:TYR:CD1	2.48	0.49
1:G:36:GLN:NE2	1:G:36:GLN:HA	2.28	0.49
1:H:36:GLN:NE2	1:H:36:GLN:HA	2.27	0.49
1:D:146:ASP:OD1	3:D:606:TRS:H12	2.13	0.49
1:J:111:ILE:HG13	1:J:117:HIS:CE1	2.47	0.49
1:A:43:LEU:HD11	1:A:125:TYR:CD1	2.47	0.49
1:D:35:ARG:HG3	1:D:35:ARG:HH21	1.76	0.49
1:C:18:ARG:HG3	1:C:18:ARG:NH2	2.27	0.49
1:C:12:THR:HB	1:C:27:LYS:NZ	2.28	0.49
1:J:36:GLN:HE21	1:J:36:GLN:HA	1.77	0.49
1:D:36:GLN:HA	1:D:36:GLN:NE2	2.27	0.49
1:B:94:THR:O	1:B:98:ILE:HG12	2.12	0.49
1:I:60:ILE:HG23	1:I:61:ALA:N	2.28	0.49
1:H:94:THR:O	1:H:98:ILE:HG12	2.13	0.49
1:A:158:PHE:O	1:A:162:ILE:HG13	2.12	0.49
1:H:43:LEU:HD11	1:H:125:TYR:CD1	2.48	0.49
1:I:37:VAL:O	1:I:41:ILE:HG13	2.13	0.49
1:G:99:ASN:HD22	1:H:96:GLN:HA	1.78	0.49
1:I:35:ARG:HH21	1:I:35:ARG:HG3	1.78	0.48
1:B:111:ILE:HG13	1:B:117:HIS:CE1	2.48	0.48
1:C:111:ILE:HG13	1:C:117:HIS:CE1	2.48	0.48
1:B:77:LEU:HD23	1:B:77:LEU:C	2.34	0.48
1:G:58:ASN:ND2	1:G:61:ALA:HB3	2.29	0.48
1:H:111:ILE:HG13	1:H:117:HIS:CE1	2.48	0.48
1:G:13:ASN:HD22	1:G:13:ASN:N	2.08	0.48
1:F:158:PHE:O	1:F:162:ILE:HG13	2.12	0.48
1:D:36:GLN:HE21	1:D:36:GLN:HA	1.78	0.48
1:G:99:ASN:ND2	1:H:96:GLN:HA	2.28	0.48
1:I:60:ILE:H	1:L:165:ASN:HD21	1.61	0.48
1:F:43:LEU:HD11	1:F:125:TYR:CD1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:15:LEU:HD13	1:E:88:GLY:O	2.13	0.48
1:H:13:ASN:H	1:H:27:LYS:HZ3	1.59	0.48
1:D:15:LEU:N	1:D:15:LEU:HD12	2.28	0.48
1:G:36:GLN:HA	1:G:36:GLN:HE21	1.78	0.48
1:C:36:GLN:NE2	1:C:36:GLN:HA	2.29	0.48
1:H:83:ARG:NH2	1:H:143:ASP:HB2	2.27	0.48
1:C:58:ASN:ND2	1:C:61:ALA:HB3	2.29	0.48
1:K:38:ILE:HG23	1:K:98:ILE:HD13	1.95	0.48
1:A:130:ASN:ND2	1:A:133:ARG:NH2	2.51	0.48
1:G:70:ARG:HH11	1:H:74:ILE:CD1	2.25	0.48
1:I:112:HIS:CE1	1:J:15:LEU:HD21	2.48	0.48
1:B:120:GLU:O	1:B:124:ARG:HG2	2.14	0.48
1:A:14:LEU:HD11	1:A:27:LYS:HG3	1.95	0.48
1:L:60:ILE:HG23	1:L:61:ALA:N	2.29	0.48
1:D:133:ARG:HE	1:F:21:VAL:HG23	1.79	0.48
1:I:38:ILE:HG23	1:I:98:ILE:HD13	1.95	0.48
1:A:55:ARG:O	1:A:114:VAL:HG23	2.13	0.48
1:B:20:ASP:H	1:E:130:ASN:HD21	1.61	0.47
1:I:28:ALA:HB3	4:I:628:HOH:O	2.13	0.47
1:G:18:ARG:HG3	1:G:18:ARG:NH2	2.29	0.47
1:F:18:ARG:HG3	1:F:18:ARG:NH2	2.29	0.47
1:F:153:ARG:HG2	1:F:153:ARG:NH1	2.28	0.47
1:H:36:GLN:HE21	1:H:36:GLN:HA	1.79	0.47
1:C:38:ILE:HG23	1:C:98:ILE:HD13	1.95	0.47
1:E:94:THR:O	1:E:98:ILE:HG12	2.14	0.47
1:B:36:GLN:NE2	1:B:36:GLN:HA	2.29	0.47
1:E:60:ILE:HG23	1:E:61:ALA:N	2.29	0.47
1:I:43:LEU:HD11	1:I:125:TYR:CD1	2.49	0.47
1:J:17:THR:C	1:J:19:ASN:H	2.18	0.47
1:I:111:ILE:HG13	1:I:117:HIS:CE1	2.49	0.47
1:E:130:ASN:HD22	1:E:133:ARG:NH2	2.01	0.47
1:B:17:THR:C	1:B:19:ASN:H	2.18	0.47
1:I:36:GLN:HE21	1:I:36:GLN:HA	1.79	0.47
1:D:113:ASN:HD21	1:D:115:GLN:CB	2.27	0.47
1:C:153:ARG:NH1	1:C:153:ARG:HG2	2.30	0.47
1:B:153:ARG:HH11	1:B:153:ARG:HG2	1.80	0.47
1:J:94:THR:O	1:J:98:ILE:HG12	2.14	0.47
1:A:35:ARG:HG3	1:A:35:ARG:HH21	1.78	0.47
1:F:167:GLU:OE1	3:F:605:TRS:H21	2.14	0.47
1:B:112:HIS:CB	4:B:226:HOH:O	2.63	0.47
1:A:13:ASN:HD21	1:A:27:LYS:NZ	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:102:THR:O	1:L:102:THR:HG23	2.15	0.47
1:E:124:ARG:HG3	1:E:124:ARG:HH21	1.80	0.47
1:C:43:LEU:HD11	1:C:125:TYR:CD1	2.50	0.47
1:I:42:ASP:OD1	1:J:95:THR:HB	2.14	0.47
1:L:43:LEU:HD11	1:L:125:TYR:CD1	2.50	0.47
1:G:120:GLU:O	1:G:124:ARG:HG2	2.14	0.47
1:E:49:GLN:HG3	1:F:94:THR:HG23	1.97	0.46
1:D:153:ARG:HG3	4:D:461:HOH:O	2.14	0.46
1:A:165:ASN:HD21	1:D:60:ILE:H	1.62	0.46
1:B:104:LEU:HA	4:B:216:HOH:O	2.14	0.46
1:K:54:MET:C	1:K:55:ARG:HG3	2.35	0.46
1:K:158:PHE:O	1:K:162:ILE:HG13	2.14	0.46
1:J:83:ARG:NH2	1:J:143:ASP:HB2	2.29	0.46
1:B:15:LEU:HD13	1:B:88:GLY:O	2.15	0.46
1:K:74:ILE:HD12	4:K:619:HOH:O	2.14	0.46
1:F:60:ILE:HG23	1:F:61:ALA:N	2.31	0.46
1:G:77:LEU:C	1:G:77:LEU:HD23	2.35	0.46
1:D:105:LYS:O	1:D:106:SER:C	2.53	0.46
1:A:60:ILE:HG23	1:A:61:ALA:N	2.29	0.46
1:L:36:GLN:NE2	1:L:36:GLN:HA	2.29	0.46
1:C:14:LEU:HD21	1:C:27:LYS:HG2	1.97	0.46
1:I:36:GLN:NE2	1:I:36:GLN:HA	2.31	0.46
1:G:17:THR:C	1:G:19:ASN:H	2.18	0.46
1:K:60:ILE:HG23	1:K:61:ALA:N	2.31	0.46
1:C:17:THR:C	1:C:19:ASN:H	2.19	0.46
1:G:74:ILE:CD1	1:H:70:ARG:HH11	2.27	0.46
1:F:94:THR:O	1:F:98:ILE:HG12	2.15	0.46
1:H:58:ASN:HD21	1:H:61:ALA:HB3	1.79	0.46
1:I:49:GLN:HG3	1:J:94:THR:CG2	2.44	0.46
1:E:109:LEU:HD21	4:E:656:HOH:O	2.16	0.46
1:B:55:ARG:O	1:B:114:VAL:HG23	2.15	0.46
1:A:77:LEU:C	1:A:77:LEU:HD23	2.35	0.46
1:E:15:LEU:N	1:E:15:LEU:HD12	2.31	0.46
1:K:17:THR:C	1:K:19:ASN:H	2.19	0.46
1:D:77:LEU:C	1:D:77:LEU:HD23	2.36	0.46
1:J:13:ASN:N	1:J:13:ASN:HD22	2.13	0.46
1:B:130:ASN:HD22	1:B:133:ARG:NH2	2.03	0.46
1:J:15:LEU:N	1:J:15:LEU:HD12	2.31	0.46
1:D:60:ILE:HG23	1:D:61:ALA:N	2.30	0.46
1:E:13:ASN:O	1:E:14:LEU:C	2.55	0.46
1:A:36:GLN:NE2	1:A:36:GLN:HA	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:39:GLN:CG	1:H:128:VAL:HG22	2.46	0.46
1:B:36:GLN:HA	1:B:36:GLN:HE21	1.80	0.46
1:B:54:MET:C	1:B:55:ARG:HG3	2.36	0.46
1:I:120:GLU:O	1:I:124:ARG:HG2	2.16	0.46
1:I:17:THR:C	1:I:19:ASN:H	2.19	0.46
1:F:36:GLN:NE2	1:F:36:GLN:HA	2.31	0.46
1:H:153:ARG:HG2	1:H:153:ARG:NH1	2.30	0.46
1:C:77:LEU:HD23	1:C:77:LEU:C	2.37	0.45
1:F:113:ASN:HD21	1:F:115:GLN:CB	2.25	0.45
1:D:153:ARG:HG2	1:D:153:ARG:HH11	1.80	0.45
1:K:55:ARG:O	1:K:114:VAL:HG23	2.15	0.45
1:C:120:GLU:O	1:C:124:ARG:HG2	2.16	0.45
1:A:39:GLN:CG	1:A:128:VAL:HG22	2.46	0.45
1:C:46:ILE:HG23	1:C:107:TYR:CD2	2.51	0.45
1:D:18:ARG:HG3	1:D:18:ARG:NH2	2.25	0.45
1:H:40:PHE:CZ	1:H:155:LEU:HD11	2.51	0.45
1:D:130:ASN:HD22	1:D:133:ARG:NH2	1.99	0.45
1:C:133:ARG:HE	1:E:21:VAL:HG23	1.80	0.45
1:I:49:GLN:HG3	1:J:94:THR:HG23	1.97	0.45
1:K:36:GLN:HA	1:K:36:GLN:HE21	1.80	0.45
1:B:37:VAL:O	1:B:41:ILE:HG13	2.16	0.45
1:K:120:GLU:O	1:K:124:ARG:HG2	2.16	0.45
1:H:133:ARG:NH1	1:H:133:ARG:CB	2.79	0.45
1:K:130:ASN:ND2	1:K:133:ARG:NH2	2.54	0.45
1:I:98:ILE:O	1:I:102:THR:HG22	2.16	0.45
1:F:36:GLN:HA	1:F:36:GLN:HE21	1.81	0.45
1:B:158:PHE:O	1:B:162:ILE:HG13	2.17	0.45
1:F:105:LYS:O	1:F:106:SER:C	2.55	0.45
1:E:153:ARG:HG2	1:E:153:ARG:NH1	2.31	0.45
1:G:83:ARG:NH2	1:G:143:ASP:HB2	2.31	0.45
1:I:20:ASP:HB2	1:K:130:ASN:ND2	2.31	0.45
1:L:77:LEU:HD23	1:L:77:LEU:C	2.36	0.45
1:A:49:GLN:HG3	1:B:94:THR:CG2	2.46	0.45
1:E:54:MET:C	1:E:55:ARG:HG3	2.37	0.45
1:A:39:GLN:HG2	1:A:128:VAL:HG22	1.99	0.45
1:K:46:ILE:HG23	1:K:107:TYR:CD2	2.51	0.45
1:J:130:ASN:ND2	1:J:133:ARG:NH2	2.52	0.45
1:C:94:THR:O	1:C:98:ILE:HG12	2.17	0.45
1:B:83:ARG:NH2	1:B:143:ASP:HB2	2.32	0.45
1:F:111:ILE:HG13	1:F:117:HIS:CE1	2.52	0.45
1:G:130:ASN:ND2	1:G:133:ARG:NH2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:77:LEU:C	1:H:77:LEU:HD23	2.37	0.45
1:E:18:ARG:HG3	1:E:18:ARG:NH2	2.30	0.45
1:C:58:ASN:HD21	1:C:61:ALA:HB3	1.81	0.45
1:G:105:LYS:O	1:G:106:SER:C	2.55	0.45
1:E:70:ARG:HH11	1:F:74:ILE:CD1	2.29	0.45
3:A:601:TRS:H31	1:D:167:GLU:CD	2.37	0.45
1:L:36:GLN:HE21	1:L:36:GLN:HA	1.81	0.45
1:H:17:THR:C	1:H:19:ASN:H	2.19	0.45
1:D:17:THR:C	1:D:19:ASN:H	2.19	0.45
1:L:158:PHE:O	1:L:162:ILE:HG13	2.17	0.45
1:J:113:ASN:HD21	1:J:115:GLN:CB	2.27	0.44
1:G:49:GLN:HG3	1:H:94:THR:CG2	2.47	0.44
1:L:58:ASN:ND2	1:L:61:ALA:HB3	2.32	0.44
1:K:83:ARG:NH2	1:K:143:ASP:HB2	2.31	0.44
1:I:96:GLN:HG3	1:J:106:SER:OG	2.17	0.44
1:D:130:ASN:ND2	1:F:20:ASP:HB2	2.31	0.44
1:L:113:ASN:HD21	1:L:115:GLN:CB	2.28	0.44
1:B:113:ASN:HD21	1:B:115:GLN:CB	2.27	0.44
1:A:94:THR:HG23	1:B:49:GLN:HG3	1.98	0.44
1:I:58:ASN:HD21	1:I:61:ALA:HB3	1.82	0.44
1:F:39:GLN:HG2	1:F:128:VAL:HG22	1.98	0.44
1:F:120:GLU:O	1:F:124:ARG:HG2	2.17	0.44
1:G:153:ARG:NH1	1:G:153:ARG:HG2	2.33	0.44
1:F:83:ARG:NH2	1:F:143:ASP:HB2	2.32	0.44
1:L:130:ASN:ND2	1:L:133:ARG:NH2	2.54	0.44
1:J:37:VAL:O	1:J:41:ILE:HG13	2.18	0.44
1:K:15:LEU:N	1:K:15:LEU:HD12	2.31	0.44
1:I:105:LYS:O	1:I:106:SER:C	2.55	0.44
1:H:105:LYS:O	1:H:106:SER:C	2.55	0.44
1:D:58:ASN:ND2	1:D:61:ALA:HB3	2.31	0.44
1:D:55:ARG:O	1:D:114:VAL:HG23	2.17	0.44
1:E:39:GLN:HG2	1:E:128:VAL:HG22	1.99	0.44
1:E:83:ARG:NH2	1:E:143:ASP:HB2	2.32	0.44
1:A:22:SER:HA	4:A:623:HOH:O	2.17	0.44
1:A:46:ILE:HG23	1:A:107:TYR:CD2	2.53	0.44
1:F:138:GLU:HG2	4:F:444:HOH:O	2.16	0.44
1:F:153:ARG:HH11	1:F:153:ARG:HG2	1.82	0.44
1:J:58:ASN:ND2	1:J:61:ALA:HB3	2.33	0.44
1:J:12:THR:CB	1:J:27:LYS:HZ3	2.29	0.44
1:J:77:LEU:HD23	1:J:77:LEU:C	2.37	0.44
1:D:37:VAL:O	1:D:41:ILE:HG13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:46:ILE:HG23	1:L:107:TYR:CD2	2.52	0.44
1:J:158:PHE:O	1:J:162:ILE:HG13	2.17	0.44
1:A:83:ARG:NH2	1:A:143:ASP:HB2	2.33	0.44
1:C:34:ASN:O	1:C:38:ILE:HG13	2.18	0.44
1:E:111:ILE:HG13	1:E:117:HIS:CE1	2.53	0.44
1:I:15:LEU:HD21	1:J:112:HIS:CE1	2.53	0.43
1:I:94:THR:O	1:I:98:ILE:HG12	2.18	0.43
1:J:83:ARG:NH2	1:J:141:ASP:OD1	2.44	0.43
1:B:111:ILE:HD13	1:B:120:GLU:HG3	2.00	0.43
1:J:120:GLU:O	1:J:124:ARG:HG2	2.18	0.43
1:G:92:LEU:HD22	1:H:109:LEU:HD13	2.00	0.43
1:F:12:THR:CB	1:F:27:LYS:HD2	2.49	0.43
1:F:12:THR:HG21	1:F:27:LYS:HD2	2.00	0.43
1:E:120:GLU:O	1:E:124:ARG:HG2	2.18	0.43
1:H:39:GLN:HG2	1:H:128:VAL:HG22	2.00	0.43
1:I:153:ARG:NH1	1:I:153:ARG:HG2	2.32	0.43
1:A:40:PHE:CZ	1:A:155:LEU:HD11	2.53	0.43
1:G:20:ASP:H	1:I:130:ASN:ND2	2.16	0.43
1:G:58:ASN:HD21	1:G:61:ALA:HB3	1.84	0.43
1:K:58:ASN:ND2	1:K:61:ALA:HB3	2.34	0.43
1:A:36:GLN:HA	1:A:36:GLN:HE21	1.82	0.43
1:H:12:THR:HG21	1:H:23:ASP:HB3	2.00	0.43
1:A:15:LEU:HD12	1:A:15:LEU:N	2.33	0.43
1:E:55:ARG:NH1	1:F:15:LEU:HD22	2.34	0.43
1:E:15:LEU:HD21	1:F:112:HIS:CE1	2.54	0.43
1:E:17:THR:C	1:E:19:ASN:H	2.22	0.43
1:I:92:LEU:HD22	1:J:109:LEU:HD13	2.00	0.43
1:G:12:THR:OG1	1:G:27:LYS:HD2	2.18	0.43
1:C:124:ARG:HH21	1:C:124:ARG:HG3	1.83	0.43
1:F:55:ARG:O	1:F:114:VAL:HG23	2.18	0.43
1:J:153:ARG:HG2	1:J:153:ARG:NH1	2.33	0.43
1:G:99:ASN:C	1:G:101:LYS:H	2.22	0.43
1:A:26:LYS:HD3	1:A:87:LEU:O	2.19	0.43
1:G:111:ILE:HG13	1:G:117:HIS:CE1	2.53	0.43
1:B:13:ASN:HD22	1:B:13:ASN:HA	1.60	0.43
1:C:109:LEU:HD21	4:C:608:HOH:O	2.17	0.43
1:G:40:PHE:CZ	1:G:155:LEU:HD11	2.53	0.43
1:A:130:ASN:HD22	1:A:133:ARG:NH2	2.05	0.43
1:L:133:ARG:NH1	1:L:133:ARG:CB	2.82	0.43
1:K:113:ASN:HD21	1:K:115:GLN:CB	2.29	0.43
1:B:60:ILE:HG23	1:B:61:ALA:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:46:ILE:HG23	1:B:107:TYR:CD2	2.53	0.43
1:A:111:ILE:HG13	1:A:117:HIS:CE1	2.53	0.43
1:J:46:ILE:HG23	1:J:107:TYR:CD2	2.53	0.43
1:G:113:ASN:HD21	1:G:115:GLN:CB	2.28	0.43
1:G:49:GLN:HG3	1:H:94:THR:HG23	2.01	0.43
1:C:165:ASN:HD21	1:F:60:ILE:H	1.67	0.43
1:G:153:ARG:HD2	1:K:147:ILE:HG13	1.99	0.43
1:F:39:GLN:CG	1:F:128:VAL:HG22	2.49	0.42
4:G:216:HOH:O	1:I:166:ILE:HD12	2.18	0.42
1:E:26:LYS:O	1:E:30:VAL:HG23	2.18	0.42
1:F:15:LEU:HD12	1:F:15:LEU:N	2.33	0.42
1:H:120:GLU:O	1:H:124:ARG:HG2	2.18	0.42
1:G:39:GLN:CG	1:G:128:VAL:HG22	2.49	0.42
1:F:104:LEU:HA	4:F:314:HOH:O	2.19	0.42
1:A:153:ARG:NH1	4:A:650:HOH:O	2.52	0.42
1:H:124:ARG:HH21	1:H:124:ARG:HG3	1.84	0.42
1:F:58:ASN:ND2	1:F:61:ALA:HB3	2.35	0.42
1:I:39:GLN:HG2	1:I:128:VAL:HG22	2.01	0.42
1:H:12:THR:CB	1:H:27:LYS:HD2	2.49	0.42
1:J:130:ASN:HD22	1:J:133:ARG:NH2	2.07	0.42
1:I:77:LEU:C	1:I:77:LEU:HD23	2.39	0.42
1:E:58:ASN:ND2	1:E:61:ALA:HB3	2.34	0.42
1:E:35:ARG:HG2	4:E:625:HOH:O	2.20	0.42
1:H:46:ILE:HG23	1:H:107:TYR:CD2	2.55	0.42
1:K:153:ARG:HG2	1:K:153:ARG:NH1	2.33	0.42
1:D:58:ASN:HD21	1:D:61:ALA:HB3	1.84	0.42
1:E:83:ARG:NH2	1:E:141:ASP:OD1	2.45	0.42
1:D:124:ARG:HH21	1:D:124:ARG:HG3	1.85	0.42
1:B:39:GLN:CG	1:B:128:VAL:HG22	2.49	0.42
1:J:39:GLN:HG2	1:J:128:VAL:HG22	2.02	0.42
1:A:113:ASN:HD21	1:A:115:GLN:CB	2.31	0.42
1:I:153:ARG:HG2	1:I:153:ARG:HH11	1.85	0.42
1:I:95:THR:HB	1:J:42:ASP:OD1	2.19	0.42
1:B:38:ILE:HG23	1:B:98:ILE:HD13	2.01	0.42
1:E:40:PHE:CZ	1:E:155:LEU:HD11	2.55	0.42
1:K:133:ARG:CB	1:K:133:ARG:NH1	2.83	0.42
1:J:133:ARG:NH1	1:J:133:ARG:CB	2.81	0.42
1:G:94:THR:O	1:G:98:ILE:HG12	2.20	0.42
1:H:111:ILE:HD13	1:H:120:GLU:HG3	2.02	0.42
1:A:13:ASN:HD21	1:A:27:LYS:HZ1	1.66	0.42
1:I:39:GLN:CG	1:I:128:VAL:HG22	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:40:PHE:CZ	1:B:155:LEU:HD11	2.55	0.42
1:A:120:GLU:O	1:A:124:ARG:HG2	2.20	0.42
1:L:17:THR:C	1:L:19:ASN:H	2.21	0.42
1:E:55:ARG:O	1:E:114:VAL:HG23	2.20	0.41
1:A:17:THR:C	1:A:19:ASN:H	2.23	0.41
1:C:55:ARG:O	1:C:114:VAL:HG23	2.20	0.41
1:E:77:LEU:C	1:E:77:LEU:HD23	2.41	0.41
1:K:21:VAL:HG12	1:K:26:LYS:HG3	2.02	0.41
1:G:124:ARG:HH21	1:G:124:ARG:HG3	1.85	0.41
1:J:40:PHE:CZ	1:J:155:LEU:HD11	2.55	0.41
1:F:133:ARG:NH1	1:F:133:ARG:CB	2.82	0.41
1:E:146:ASP:OD1	3:E:603:TRS:H31	2.21	0.41
1:A:37:VAL:O	1:A:41:ILE:HG13	2.20	0.41
1:J:39:GLN:CG	1:J:128:VAL:HG22	2.51	0.41
1:L:120:GLU:O	1:L:124:ARG:HG2	2.21	0.41
1:L:124:ARG:HG3	1:L:124:ARG:HH21	1.85	0.41
1:H:118:LEU:HD12	1:H:118:LEU:HA	1.91	0.41
1:C:153:ARG:HG2	1:C:153:ARG:HH11	1.86	0.41
1:J:60:ILE:CG2	1:J:61:ALA:N	2.84	0.41
1:L:102:THR:C	1:L:104:LEU:H	2.23	0.41
1:I:124:ARG:HH21	1:I:124:ARG:HG3	1.86	0.41
1:E:105:LYS:O	1:E:106:SER:C	2.58	0.41
1:F:13:ASN:HA	1:F:13:ASN:HD22	1.56	0.41
1:A:133:ARG:NH1	1:A:133:ARG:CB	2.82	0.41
1:F:38:ILE:HG23	1:F:98:ILE:HD13	2.02	0.41
1:I:60:ILE:HG22	4:L:621:HOH:O	2.20	0.41
1:C:83:ARG:NH2	1:C:143:ASP:HB2	2.35	0.41
1:I:40:PHE:CZ	1:I:155:LEU:HD11	2.54	0.41
1:B:105:LYS:O	1:B:106:SER:C	2.59	0.41
1:I:14:LEU:HD11	1:I:27:LYS:HG3	2.03	0.41
1:K:13:ASN:O	1:K:14:LEU:HD23	2.21	0.41
1:E:74:ILE:CD1	1:F:70:ARG:HH11	2.30	0.41
1:B:153:ARG:HH11	1:B:153:ARG:CG	2.34	0.41
1:L:94:THR:O	1:L:98:ILE:HG12	2.20	0.41
1:C:36:GLN:HE21	1:C:36:GLN:HA	1.84	0.41
1:K:94:THR:O	1:K:98:ILE:HG12	2.21	0.41
1:A:112:HIS:CE1	1:B:15:LEU:HD21	2.56	0.41
1:A:60:ILE:H	1:E:165:ASN:HD21	1.67	0.41
1:D:20:ASP:O	1:D:21:VAL:C	2.59	0.41
1:F:34:ASN:O	1:F:38:ILE:HG13	2.21	0.41
1:H:153:ARG:HG2	1:H:153:ARG:HH11	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:133:ARG:CB	1:D:133:ARG:NH1	2.83	0.41
1:E:146:ASP:OD2	3:E:603:TRS:H31	2.21	0.41
1:B:34:ASN:O	1:B:38:ILE:HG13	2.20	0.41
1:E:58:ASN:HD21	1:E:61:ALA:HB3	1.86	0.41
1:F:153:ARG:HH11	1:F:153:ARG:CG	2.34	0.41
1:K:34:ASN:O	1:K:38:ILE:HG13	2.20	0.41
1:E:153:ARG:HH11	1:E:153:ARG:HG2	1.86	0.41
1:I:106:SER:OG	1:J:96:GLN:HG3	2.20	0.41
1:E:39:GLN:CG	1:E:128:VAL:HG22	2.51	0.41
1:I:73:LEU:HD12	1:I:73:LEU:HA	1.92	0.41
1:D:38:ILE:HG23	1:D:98:ILE:HD13	2.03	0.41
1:K:111:ILE:HD13	1:K:120:GLU:HG3	2.02	0.41
1:B:12:THR:O	1:B:27:LYS:NZ	2.54	0.41
1:D:83:ARG:NH2	1:D:143:ASP:HB2	2.36	0.41
1:G:99:ASN:O	1:G:100:SER:HB2	2.21	0.40
1:L:21:VAL:HG12	1:L:26:LYS:HG3	2.03	0.40
1:K:14:LEU:HD11	1:K:27:LYS:HG3	2.02	0.40
1:A:153:ARG:NH1	1:A:153:ARG:HG2	2.35	0.40
1:D:120:GLU:O	1:D:124:ARG:HG2	2.22	0.40
1:B:39:GLN:HG2	1:B:128:VAL:HG22	2.03	0.40
1:D:46:ILE:HG23	1:D:107:TYR:CD2	2.56	0.40
1:B:73:LEU:HD12	1:B:73:LEU:HA	1.94	0.40
1:F:17:THR:C	1:F:19:ASN:H	2.23	0.40
1:I:42:ASP:OD1	1:J:95:THR:CG2	2.69	0.40
1:L:153:ARG:NH1	1:L:153:ARG:HG2	2.36	0.40
1:H:113:ASN:HD21	1:H:115:GLN:CB	2.28	0.40
1:H:29:THR:HG23	1:H:144:THR:HG21	2.03	0.40
1:J:60:ILE:H	1:K:165:ASN:HD21	1.68	0.40
1:K:105:LYS:O	1:K:106:SER:C	2.59	0.40
1:F:130:ASN:HD22	1:F:133:ARG:NH2	2.05	0.40
1:G:133:ARG:CB	1:G:133:ARG:NH1	2.84	0.40
1:G:60:ILE:CG2	1:G:61:ALA:N	2.84	0.40
1:I:130:ASN:ND2	1:I:133:ARG:NH2	2.57	0.40
1:E:49:GLN:HG3	1:F:94:THR:HG22	2.04	0.40
1:A:38:ILE:HG23	1:A:98:ILE:HD13	2.03	0.40
1:A:105:LYS:O	1:A:106:SER:C	2.59	0.40
1:D:153:ARG:CG	1:D:153:ARG:HH11	2.34	0.40
1:J:124:ARG:HH21	1:J:124:ARG:HG3	1.86	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	154/167 (92%)	147 (96%)	5 (3%)	2 (1%)	15	42
1	B	154/167 (92%)	141 (92%)	11 (7%)	2 (1%)	15	42
1	C	154/167 (92%)	144 (94%)	8 (5%)	2 (1%)	15	42
1	D	154/167 (92%)	148 (96%)	4 (3%)	2 (1%)	15	42
1	E	154/167 (92%)	143 (93%)	8 (5%)	3 (2%)	10	32
1	F	154/167 (92%)	145 (94%)	7 (4%)	2 (1%)	15	42
1	G	154/167 (92%)	141 (92%)	11 (7%)	2 (1%)	15	42
1	H	154/167 (92%)	142 (92%)	8 (5%)	4 (3%)	7	23
1	I	154/167 (92%)	144 (94%)	9 (6%)	1 (1%)	30	63
1	J	154/167 (92%)	143 (93%)	9 (6%)	2 (1%)	15	42
1	K	154/167 (92%)	143 (93%)	9 (6%)	2 (1%)	15	42
1	L	154/167 (92%)	141 (92%)	11 (7%)	2 (1%)	15	42
All	All	1848/2004 (92%)	1722 (93%)	100 (5%)	26 (1%)	14	40

All (26) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	13	ASN
1	A	21	VAL
1	D	21	VAL
1	E	13	ASN
1	G	21	VAL
1	H	21	VAL
1	H	101	LYS
1	I	21	VAL
1	J	21	VAL
1	K	13	ASN
1	K	21	VAL
1	L	14	LEU

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Mol	Chain	Res	Type
1	L	21	VAL
1	B	21	VAL
1	C	21	VAL
1	E	14	LEU
1	E	21	VAL
1	F	21	VAL
1	G	14	LEU
1	H	100	SER
1	J	101	LYS
1	D	106	SER
1	F	106	SER
1	B	106	SER
1	C	13	ASN
1	H	106	SER

### 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	134/143 (94%)	125 (93%)	9 (7%)	20	47
1	B	134/143 (94%)	124 (92%)	10 (8%)	17	41
1	C	134/143 (94%)	126 (94%)	8 (6%)	24	53
1	D	134/143 (94%)	125 (93%)	9 (7%)	20	47
1	E	134/143 (94%)	125 (93%)	9 (7%)	20	47
1	F	134/143 (94%)	125 (93%)	9 (7%)	20	47
1	G	134/143 (94%)	124 (92%)	10 (8%)	17	41
1	H	134/143 (94%)	126 (94%)	8 (6%)	24	53
1	I	134/143 (94%)	124 (92%)	10 (8%)	17	41
1	J	134/143 (94%)	126 (94%)	8 (6%)	24	53
1	K	134/143 (94%)	125 (93%)	9 (7%)	20	47
1	L	134/143 (94%)	126 (94%)	8 (6%)	24	53
All	All	1608/1716 (94%)	1501 (93%)	107 (7%)	20	47



All (107) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	23	ASP
1	A	31	GLU
1	A	49	GLN
1	A	58	ASN
1	A	73	LEU
1	A	96	GLN
1	A	102	THR
1	A	118	LEU
1	A	153	ARG
1	B	13	ASN
1	B	23	ASP
1	B	31	GLU
1	B	49	GLN
1	B	58	ASN
1	B	73	LEU
1	B	96	GLN
1	B	102	THR
1	B	118	LEU
1	B	153	ARG
1	C	23	ASP
1	C	31	GLU
1	C	49	GLN
1	C	58	ASN
1	C	73	LEU
1	C	96	GLN
1	C	118	LEU
1	C	153	ARG
1	D	23	ASP
1	D	31	GLU
1	D	49	GLN
1	D	58	ASN
1	D	73	LEU
1	D	96	GLN
1	D	99	ASN
1	D	118	LEU
1	D	153	ARG
1	E	23	ASP
1	E	31	GLU
1	E	49	GLN
1	E	58	ASN
1	E	73	LEU
1	E	96	GLN

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Mol	Chain	Res	Type
1	E	102	THR
1	E	118	LEU
1	E	153	ARG
1	F	13	ASN
1	F	23	ASP
1	F	31	GLU
1	F	49	GLN
1	F	58	ASN
1	F	73	LEU
1	F	96	GLN
1	F	118	LEU
1	F	153	ARG
1	G	12	THR
1	G	23	ASP
1	G	31	GLU
1	G	49	GLN
1	G	58	ASN
1	G	73	LEU
1	G	96	GLN
1	G	102	THR
1	G	118	LEU
1	G	153	ARG
1	H	23	ASP
1	H	31	GLU
1	H	49	GLN
1	H	58	ASN
1	H	73	LEU
1	H	96	GLN
1	H	118	LEU
1	H	153	ARG
1	I	13	ASN
1	I	23	ASP
1	I	31	GLU
1	I	49	GLN
1	I	58	ASN
1	I	73	LEU
1	I	96	GLN
1	I	99	ASN
1	I	118	LEU
1	I	153	ARG
1	J	23	ASP
1	J	31	GLU

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Mol	Chain	Res	Type
1	J	49	GLN
1	J	58	ASN
1	J	73	LEU
1	J	96	GLN
1	J	118	LEU
1	J	153	ARG
1	K	23	ASP
1	K	31	GLU
1	K	49	GLN
1	K	58	ASN
1	K	73	LEU
1	K	96	GLN
1	K	99	ASN
1	K	118	LEU
1	K	153	ARG
1	L	23	ASP
1	L	31	GLU
1	L	49	GLN
1	L	58	ASN
1	L	73	LEU
1	L	96	GLN
1	L	118	LEU
1	L	153	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (107) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	13	ASN
1	A	36	GLN
1	A	39	GLN
1	A	58	ASN
1	A	96	GLN
1	A	112	HIS
1	A	113	ASN
1	A	130	ASN
1	A	165	ASN
1	B	13	ASN
1	B	36	GLN
1	B	39	GLN
1	B	58	ASN
1	B	96	GLN
1	B	99	ASN

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Mol	Chain	Res	Type
1	B	112	HIS
1	B	113	ASN
1	B	130	ASN
1	C	36	GLN
1	C	39	GLN
1	C	49	GLN
1	C	58	ASN
1	C	96	GLN
1	C	112	HIS
1	C	113	ASN
1	C	130	ASN
1	C	165	ASN
1	D	13	ASN
1	D	36	GLN
1	D	39	GLN
1	D	49	GLN
1	D	58	ASN
1	D	96	GLN
1	D	113	ASN
1	D	130	ASN
1	D	165	ASN
1	E	36	GLN
1	E	39	GLN
1	E	58	ASN
1	E	112	HIS
1	E	113	ASN
1	E	130	ASN
1	E	165	ASN
1	F	13	ASN
1	F	36	GLN
1	F	39	GLN
1	F	58	ASN
1	F	96	GLN
1	F	112	HIS
1	F	113	ASN
1	F	130	ASN
1	F	165	ASN
1	G	13	ASN
1	G	36	GLN
1	G	39	GLN
1	G	58	ASN
1	G	96	GLN

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Mol	Chain	Res	Type
1	G	99	ASN
1	G	112	HIS
1	G	113	ASN
1	G	130	ASN
1	H	36	GLN
1	H	39	GLN
1	H	58	ASN
1	H	96	GLN
1	H	99	ASN
1	H	112	HIS
1	H	113	ASN
1	H	130	ASN
1	H	165	ASN
1	I	13	ASN
1	I	36	GLN
1	I	39	GLN
1	I	58	ASN
1	I	96	GLN
1	I	112	HIS
1	I	113	ASN
1	I	130	ASN
1	I	165	ASN
1	J	13	ASN
1	J	36	GLN
1	J	39	GLN
1	J	58	ASN
1	J	96	GLN
1	J	99	ASN
1	J	112	HIS
1	J	113	ASN
1	J	130	ASN
1	J	165	ASN
1	K	36	GLN
1	K	39	GLN
1	K	49	GLN
1	K	58	ASN
1	K	96	GLN
1	K	99	ASN
1	K	113	ASN
1	K	130	ASN
1	K	165	ASN
1	L	36	GLN

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Mol	Chain	Res	Type
1	L	39	GLN
1	L	49	GLN
1	L	58	ASN
1	L	96	GLN
1	L	99	ASN
1	L	113	ASN
1	L	130	ASN
1	L	165	ASN

### 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 carbohydrates in this entry.

### 5.6 Ligand geometry [i](#)

Of 24 ligands modelled in this entry, 12 are monoatomic - leaving 12 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	$\# Z  > 2$
3	TRS	A	601	-	7,7,7	1.39	1 (14%)	9,9,9	1.74	3 (33%)
3	TRS	A	602	-	7,7,7	1.66	3 (42%)	9,9,9	1.72	3 (33%)
3	TRS	C	604	-	7,7,7	1.81	1 (14%)	9,9,9	1.59	2 (22%)
3	TRS	D	606	-	7,7,7	1.55	1 (14%)	9,9,9	1.72	2 (22%)
3	TRS	E	603	-	7,7,7	1.27	1 (14%)	9,9,9	2.04	4 (44%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	TRS	F	605	-	7,7,7	1.47	1 (14%)	9,9,9	1.71	3 (33%)
3	TRS	I	607	-	7,7,7	1.53	1 (14%)	9,9,9	1.70	3 (33%)
3	TRS	J	611	-	7,7,7	1.35	1 (14%)	9,9,9	1.70	3 (33%)
3	TRS	J	612	-	7,7,7	1.50	1 (14%)	9,9,9	1.70	3 (33%)
3	TRS	K	610	-	7,7,7	1.62	1 (14%)	9,9,9	1.59	2 (22%)
3	TRS	L	608	-	7,7,7	1.53	1 (14%)	9,9,9	1.64	3 (33%)
3	TRS	L	609	-	7,7,7	1.55	1 (14%)	9,9,9	1.66	4 (44%)

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
3	TRS	A	601	-	-	0/9/9/9	0/0/0/0
3	TRS	A	602	-	-	0/9/9/9	0/0/0/0
3	TRS	C	604	-	-	0/9/9/9	0/0/0/0
3	TRS	D	606	-	-	0/9/9/9	0/0/0/0
3	TRS	E	603	-	-	0/9/9/9	0/0/0/0
3	TRS	F	605	-	-	0/9/9/9	0/0/0/0
3	TRS	I	607	-	-	0/9/9/9	0/0/0/0
3	TRS	J	611	-	-	0/9/9/9	0/0/0/0
3	TRS	J	612	-	-	0/9/9/9	0/0/0/0
3	TRS	K	610	-	-	0/9/9/9	0/0/0/0
3	TRS	L	608	-	-	0/9/9/9	0/0/0/0
3	TRS	L	609	-	-	0/9/9/9	0/0/0/0

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	606	TRS	C-N	-3.99	1.44	1.50
3	I	607	TRS	C-N	-3.58	1.45	1.50
3	C	604	TRS	C-N	-3.43	1.45	1.50
3	J	612	TRS	C-N	-3.43	1.45	1.50
3	F	605	TRS	C-N	-3.40	1.45	1.50
3	K	610	TRS	C-N	-3.17	1.46	1.50
3	A	601	TRS	C-N	-3.06	1.46	1.50
3	J	611	TRS	C-N	-2.99	1.46	1.50
3	L	608	TRS	C-N	-2.96	1.46	1.50
3	L	609	TRS	C-N	-2.90	1.46	1.50
3	A	602	TRS	C-N	-2.70	1.46	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	E	603	TRS	C-N	-2.67	1.46	1.50
3	A	602	TRS	C2-C	2.18	1.57	1.53
3	A	602	TRS	C1-C	2.46	1.57	1.53

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	E	603	TRS	C2-C-C1	-3.15	103.95	110.78
3	D	606	TRS	C2-C-C1	-2.69	104.95	110.78
3	J	612	TRS	C2-C-C1	-2.69	104.96	110.78
3	A	601	TRS	C2-C-C1	-2.64	105.06	110.78
3	I	607	TRS	C2-C-C1	-2.47	105.43	110.78
3	F	605	TRS	C2-C-C1	-2.44	105.51	110.78
3	L	608	TRS	C2-C-C1	-2.41	105.57	110.78
3	C	604	TRS	C2-C-C1	-2.40	105.59	110.78
3	L	609	TRS	C2-C-C1	-2.36	105.67	110.78
3	A	602	TRS	C2-C-C1	-2.36	105.68	110.78
3	J	611	TRS	C2-C-C1	-2.34	105.71	110.78
3	K	610	TRS	C2-C-C1	-2.23	105.96	110.78
3	E	603	TRS	C3-C-C2	-2.03	106.39	110.78
3	L	609	TRS	C2-C-N	2.00	111.73	108.09
3	L	609	TRS	C1-C-N	2.02	111.77	108.09
3	J	611	TRS	C3-C-N	2.03	111.78	108.09
3	L	608	TRS	C2-C-N	2.04	111.81	108.09
3	L	609	TRS	C3-C-N	2.05	111.82	108.09
3	L	608	TRS	C1-C-N	2.08	111.87	108.09
3	K	610	TRS	C1-C-N	2.10	111.91	108.09
3	J	612	TRS	C3-C-N	2.14	111.98	108.09
3	J	611	TRS	C1-C-N	2.14	111.99	108.09
3	C	604	TRS	C1-C-N	2.23	112.14	108.09
3	I	607	TRS	C3-C-N	2.25	112.18	108.09
3	A	601	TRS	C1-C-N	2.26	112.19	108.09
3	F	605	TRS	C1-C-N	2.27	112.22	108.09
3	F	605	TRS	C2-C-N	2.27	112.22	108.09
3	J	612	TRS	C1-C-N	2.27	112.23	108.09
3	I	607	TRS	C2-C-N	2.28	112.24	108.09
3	A	602	TRS	C1-C-N	2.31	112.30	108.09
3	A	601	TRS	C3-C-N	2.39	112.43	108.09
3	A	602	TRS	C2-C-N	2.51	112.65	108.09
3	D	606	TRS	C2-C-N	2.60	112.82	108.09
3	E	603	TRS	C3-C-N	2.97	113.50	108.09
3	E	603	TRS	C1-C-N	3.13	113.79	108.09



There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	601	TRS	3	0
3	D	606	TRS	2	0
3	E	603	TRS	3	0
3	F	605	TRS	1	0
3	J	611	TRS	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<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	156/167 (93%)	0.19	1 (0%) 90 89	27, 47, 69, 78	0
1	B	156/167 (93%)	0.19	1 (0%) 90 89	28, 51, 73, 93	0
1	C	156/167 (93%)	0.09	1 (0%) 90 89	24, 44, 68, 90	0
1	D	156/167 (93%)	0.05	0 100 100	22, 37, 61, 68	0
1	E	156/167 (93%)	0.15	1 (0%) 90 89	23, 42, 63, 79	0
1	F	156/167 (93%)	0.16	0 100 100	24, 41, 62, 80	0
1	G	156/167 (93%)	1.43	41 (26%) 1 0	57, 88, 106, 119	0
1	H	156/167 (93%)	1.70	58 (37%) 0 0	66, 93, 107, 120	0
1	I	156/167 (93%)	0.69	11 (7%) 19 13	48, 73, 93, 99	0
1	J	156/167 (93%)	0.94	23 (14%) 3 2	48, 74, 108, 132	0
1	K	156/167 (93%)	0.91	22 (14%) 4 2	49, 83, 100, 109	0
1	L	156/167 (93%)	1.72	56 (35%) 0 0	74, 98, 112, 134	0
All	All	1872/2004 (93%)	0.69	215 (11%) 6 4	22, 63, 104, 134	0

All (215) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	L	87	LEU	10.5
1	L	88	GLY	8.8
1	J	14	LEU	8.1
1	L	141	ASP	8.0
1	H	109	LEU	6.5
1	H	125	TYR	6.2
1	G	136	ILE	6.1
1	H	148	LEU	6.0
1	H	14	LEU	5.6
1	L	15	LEU	5.5
1	H	166	ILE	5.4

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Mol	Chain	Res	Type	RSRZ
1	H	12	THR	5.4
1	E	12	THR	5.4
1	J	13	ASN	5.4
1	H	46	ILE	5.3
1	G	38	ILE	5.3
1	J	15	LEU	5.1
1	G	88	GLY	5.0
1	L	148	LEU	4.9
1	H	52	TRP	4.8
1	G	89	GLY	4.8
1	H	13	ASN	4.7
1	H	165	ASN	4.6
1	H	93	GLY	4.6
1	L	85	VAL	4.6
1	L	17	THR	4.6
1	G	15	LEU	4.6
1	G	159	LEU	4.6
1	H	139	ALA	4.5
1	H	107	TYR	4.5
1	K	87	LEU	4.4
1	H	66	LEU	4.4
1	L	156	ASP	4.3
1	G	29	THR	4.3
1	H	159	LEU	4.3
1	L	125	TYR	4.2
1	L	81	ALA	4.2
1	G	86	GLN	4.1
1	G	14	LEU	4.1
1	J	21	VAL	4.1
1	H	132	VAL	4.0
1	J	161	PHE	4.0
1	J	16	TYR	3.9
1	L	128	VAL	3.9
1	H	73	LEU	3.9
1	H	53	ASN	3.9
1	L	41	ILE	3.8
1	L	50	ALA	3.8
1	G	33	LEU	3.7
1	H	49	GLN	3.7
1	L	19	ASN	3.6
1	H	19	ASN	3.6
1	J	88	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
1	K	39	GLN	3.5
1	L	52	TRP	3.5
1	K	111	ILE	3.5
1	J	111	ILE	3.5
1	L	56	GLY	3.5
1	G	104	LEU	3.4
1	H	81	ALA	3.4
1	H	50	ALA	3.4
1	H	140	LYS	3.4
1	G	118	LEU	3.4
1	H	87	LEU	3.4
1	L	14	LEU	3.3
1	H	38	ILE	3.3
1	H	121	LEU	3.3
1	L	89	GLY	3.3
1	L	115	GLN	3.3
1	G	42	ASP	3.3
1	H	89	GLY	3.3
1	H	134	LYS	3.3
1	J	17	THR	3.3
1	H	47	THR	3.3
1	L	40	PHE	3.2
1	G	87	LEU	3.2
1	L	96	GLN	3.2
1	G	100	SER	3.2
1	L	91	ALA	3.2
1	L	54	MET	3.2
1	H	54	MET	3.2
1	H	84	ALA	3.2
1	L	121	LEU	3.2
1	K	93	GLY	3.1
1	K	92	LEU	3.1
1	I	162	ILE	3.1
1	L	37	VAL	3.1
1	G	162	ILE	3.0
1	G	16	TYR	3.0
1	L	45	LEU	3.0
1	K	140	LYS	3.0
1	G	139	ALA	3.0
1	J	90	VAL	3.0
1	J	91	ALA	3.0
1	L	104	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
1	H	26	LYS	3.0
1	G	165	ASN	2.9
1	J	112	HIS	2.9
1	A	111	ILE	2.9
1	L	43	LEU	2.9
1	H	77	LEU	2.9
1	J	87	LEU	2.9
1	I	144	THR	2.9
1	I	160	TRP	2.8
1	H	123	ASP	2.8
1	L	111	ILE	2.8
1	G	161	PHE	2.8
1	L	116	ASP	2.8
1	L	36	GLN	2.8
1	H	92	LEU	2.8
1	G	84	ALA	2.8
1	G	125	TYR	2.7
1	G	21	VAL	2.7
1	K	19	ASN	2.7
1	L	39	GLN	2.7
1	H	29	THR	2.7
1	H	17	THR	2.7
1	J	29	THR	2.7
1	L	92	LEU	2.7
1	H	163	GLU	2.7
1	G	52	TRP	2.7
1	L	106	SER	2.7
1	G	73	LEU	2.6
1	G	81	ALA	2.6
1	K	25	GLU	2.6
1	H	114	VAL	2.6
1	I	107	TYR	2.6
1	J	136	ILE	2.6
1	H	21	VAL	2.6
1	K	104	LEU	2.6
1	G	111	ILE	2.6
1	L	62	VAL	2.6
1	L	35	ARG	2.5
1	H	15	LEU	2.5
1	L	46	ILE	2.5
1	H	156	ASP	2.5
1	L	107	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
1	K	43	LEU	2.5
1	L	147	ILE	2.5
1	I	17	THR	2.5
1	K	91	ALA	2.5
1	H	161	PHE	2.5
1	G	44	SER	2.5
1	K	125	TYR	2.5
1	L	117	HIS	2.5
1	H	142	ASP	2.5
1	L	98	ILE	2.5
1	J	12	THR	2.4
1	K	149	THR	2.4
1	G	107	TYR	2.4
1	K	32	LEU	2.4
1	G	124	ARG	2.4
1	H	95	THR	2.4
1	L	84	ALA	2.4
1	G	112	HIS	2.4
1	G	116	ASP	2.4
1	I	87	LEU	2.4
1	C	87	LEU	2.4
1	G	93	GLY	2.4
1	I	38	ILE	2.4
1	L	144	THR	2.4
1	I	16	TYR	2.3
1	K	132	VAL	2.3
1	G	77	LEU	2.3
1	K	83	ARG	2.3
1	G	91	ALA	2.3
1	H	80	MET	2.3
1	L	93	GLY	2.3
1	K	162	ILE	2.3
1	H	39	GLN	2.3
1	H	122	ALA	2.3
1	H	94	THR	2.3
1	L	29	THR	2.3
1	H	133	ARG	2.3
1	K	145	ALA	2.3
1	L	38	ILE	2.3
1	L	53	ASN	2.2
1	L	112	HIS	2.2
1	G	90	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
1	L	32	LEU	2.2
1	L	109	LEU	2.2
1	H	57	ALA	2.2
1	G	105	LYS	2.2
1	J	22	SER	2.2
1	B	87	LEU	2.2
1	K	55	ARG	2.2
1	L	16	TYR	2.2
1	L	63	HIS	2.2
1	K	29	THR	2.2
1	L	55	ARG	2.2
1	I	39	GLN	2.2
1	H	33	LEU	2.1
1	K	30	VAL	2.1
1	J	107	TYR	2.1
1	H	104	LEU	2.1
1	J	24	SER	2.1
1	I	166	ILE	2.1
1	K	40	PHE	2.1
1	H	91	ALA	2.1
1	L	130	ASN	2.1
1	H	160	TRP	2.1
1	L	118	LEU	2.1
1	H	60	ILE	2.1
1	G	164	SER	2.1
1	J	104	LEU	2.1
1	G	160	TRP	2.0
1	L	47	THR	2.0
1	G	109	LEU	2.0
1	J	140	LYS	2.0
1	I	118	LEU	2.0
1	J	84	ALA	2.0
1	H	27	LYS	2.0
1	G	66	LEU	2.0
1	J	62	VAL	2.0
1	H	69	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 carbohydrates in this entry.

## 6.4 Ligands ⓘ

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
3	TRS	I	607	8/8	0.76	0.36	3.10	97,98,99,99	0
3	TRS	E	603	8/8	0.89	0.24	2.45	45,47,48,50	0
2	ZN	E	201	1/1	0.99	0.19	1.16	29,29,29,29	0
2	ZN	D	201	1/1	0.99	0.19	0.43	24,24,24,24	0
3	TRS	F	605	8/8	0.94	0.23	0.39	53,54,55,58	0
3	TRS	J	612	8/8	0.93	0.21	0.36	70,71,72,72	0
3	TRS	A	601	8/8	0.92	0.22	0.25	48,50,52,54	0
2	ZN	F	201	1/1	0.99	0.19	-0.36	33,33,33,33	0
3	TRS	D	606	8/8	0.97	0.16	-0.42	35,36,37,38	0
3	TRS	L	608	8/8	0.88	0.30	-0.65	83,85,85,85	0
2	ZN	J	201	1/1	0.98	0.16	-0.77	62,62,62,62	0
2	ZN	H	201	1/1	0.95	0.20	-0.80	66,66,66,66	0
2	ZN	G	201	1/1	0.97	0.14	-0.89	78,78,78,78	0
2	ZN	C	201	1/1	0.98	0.16	-1.06	31,31,31,31	0
3	TRS	J	611	8/8	0.88	0.21	-1.11	66,69,70,70	0
2	ZN	I	201	1/1	0.97	0.17	-1.14	48,48,48,48	0
2	ZN	B	201	1/1	1.00	0.14	-1.25	32,32,32,32	0
2	ZN	L	201	1/1	0.88	0.13	-1.65	91,91,91,91	0
2	ZN	A	201	1/1	0.99	0.16	-1.91	33,33,33,33	0
2	ZN	K	201	1/1	0.99	0.09	-2.50	54,54,54,54	0
3	TRS	C	604	8/8	0.84	0.24	-	72,74,75,76	0
3	TRS	L	609	8/8	0.78	0.22	-	86,88,88,89	0
3	TRS	K	610	8/8	0.66	0.30	-	100,102,102,103	0
3	TRS	A	602	8/8	0.84	0.26	-	65,67,67,69	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.