



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 17, 2024 – 01:07 PM EST

PDB ID : 3S7V  
Title : Unassembled KI Polyomavirus VP1 Pentamer  
Authors : Neu, U.; Stehle, T.  
Deposited on : 2011-05-27  
Resolution : 2.55 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

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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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  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

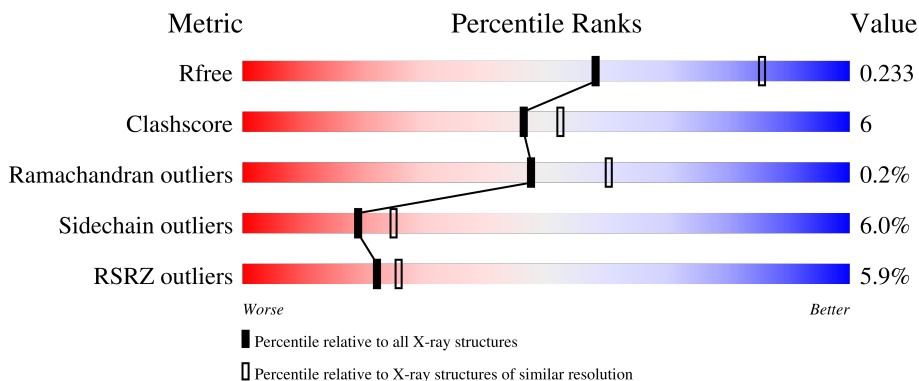
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.55 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))
$R_{free}$	130704	1284 (2.56-2.52)
Clashscore	141614	1332 (2.56-2.52)
Ramachandran outliers	138981	1315 (2.56-2.52)
Sidechain outliers	138945	1315 (2.56-2.52)
RSRZ outliers	127900	1272 (2.56-2.52)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . 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	277	 4% 79% 12% • 7%
1	B	277	 2% 81% 12% • 5%
1	C	277	 3% 83% 12% • •
1	D	277	 6% 80% 12% • 6%
1	E	277	 11% 79% 13% • 6%

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Mol	Chain	Length	Quality of chain
1	F	277	 6% 78% 16% • •
1	G	277	 6% 79% 12% • 7%
1	H	277	 4% 81% 13% • •
1	I	277	 8% 79% 12% • 8%
1	J	277	 5% 80% 12% • 6%

## 2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 20343 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 Major capsid protein VP1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	257	Total 1987	C 1261	N 340	O 378	S 8	0	0	0
1	B	262	Total 2024	C 1283	N 350	O 384	S 7	0	0	0
1	C	268	Total 2072	C 1310	N 356	O 397	S 9	0	0	0
1	D	261	Total 2019	C 1280	N 347	O 384	S 8	0	0	0
1	E	261	Total 2017	C 1277	N 348	O 385	S 7	0	0	0
1	F	266	Total 2061	C 1303	N 355	O 394	S 9	0	0	0
1	G	258	Total 1995	C 1265	N 341	O 381	S 8	0	0	0
1	H	265	Total 2049	C 1298	N 349	O 393	S 9	0	0	0
1	I	256	Total 1979	C 1256	N 339	O 377	S 7	0	0	0
1	J	261	Total 2023	C 1281	N 346	O 388	S 8	0	0	0

There are 40 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	28	GLY	-	expression tag	UNP A3R4N3
A	29	SER	-	expression tag	UNP A3R4N3
A	30	HIS	-	expression tag	UNP A3R4N3
A	31	MET	-	expression tag	UNP A3R4N3
B	28	GLY	-	expression tag	UNP A3R4N3
B	29	SER	-	expression tag	UNP A3R4N3
B	30	HIS	-	expression tag	UNP A3R4N3
B	31	MET	-	expression tag	UNP A3R4N3
C	28	GLY	-	expression tag	UNP A3R4N3

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Chain	Residue	Modelled	Actual	Comment	Reference
C	29	SER	-	expression tag	UNP A3R4N3
C	30	HIS	-	expression tag	UNP A3R4N3
C	31	MET	-	expression tag	UNP A3R4N3
D	28	GLY	-	expression tag	UNP A3R4N3
D	29	SER	-	expression tag	UNP A3R4N3
D	30	HIS	-	expression tag	UNP A3R4N3
D	31	MET	-	expression tag	UNP A3R4N3
E	28	GLY	-	expression tag	UNP A3R4N3
E	29	SER	-	expression tag	UNP A3R4N3
E	30	HIS	-	expression tag	UNP A3R4N3
E	31	MET	-	expression tag	UNP A3R4N3
F	28	GLY	-	expression tag	UNP A3R4N3
F	29	SER	-	expression tag	UNP A3R4N3
F	30	HIS	-	expression tag	UNP A3R4N3
F	31	MET	-	expression tag	UNP A3R4N3
G	28	GLY	-	expression tag	UNP A3R4N3
G	29	SER	-	expression tag	UNP A3R4N3
G	30	HIS	-	expression tag	UNP A3R4N3
G	31	MET	-	expression tag	UNP A3R4N3
H	28	GLY	-	expression tag	UNP A3R4N3
H	29	SER	-	expression tag	UNP A3R4N3
H	30	HIS	-	expression tag	UNP A3R4N3
H	31	MET	-	expression tag	UNP A3R4N3
I	28	GLY	-	expression tag	UNP A3R4N3
I	29	SER	-	expression tag	UNP A3R4N3
I	30	HIS	-	expression tag	UNP A3R4N3
I	31	MET	-	expression tag	UNP A3R4N3
J	28	GLY	-	expression tag	UNP A3R4N3
J	29	SER	-	expression tag	UNP A3R4N3
J	30	HIS	-	expression tag	UNP A3R4N3
J	31	MET	-	expression tag	UNP A3R4N3

- Molecule 2 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	6	Total O 6 6	0	0
2	B	8	Total O 8 8	0	0
2	C	14	Total O 14 14	0	0
2	D	9	Total O 9 9	0	0

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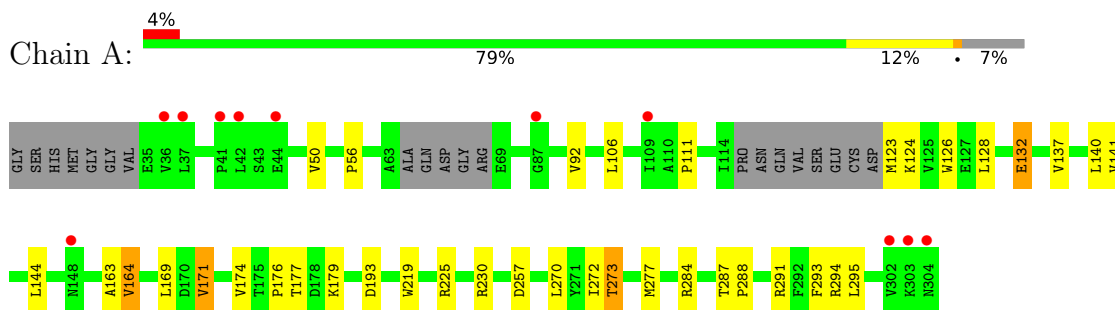
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<b>Mol</b>	<b>Chain</b>	<b>Residues</b>	<b>Atoms</b>	<b>ZeroOcc</b>	<b>AltConf</b>
2	E	4	Total O 4 4	0	0
2	F	18	Total O 18 18	0	0
2	G	13	Total O 13 13	0	0
2	H	6	Total O 6 6	0	0
2	I	23	Total O 23 23	0	0
2	J	16	Total O 16 16	0	0

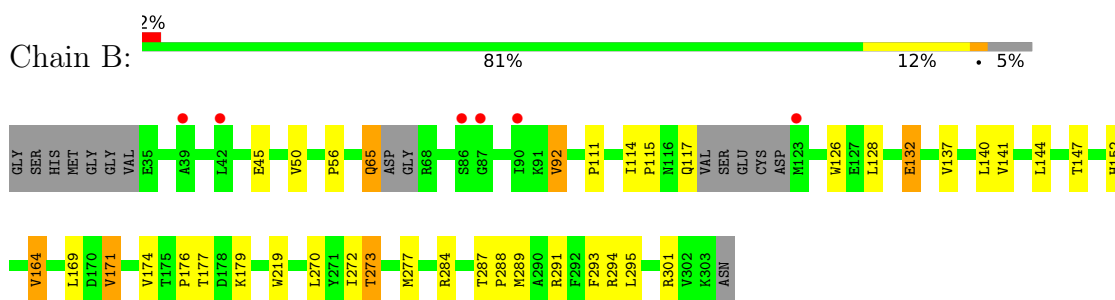
### 3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

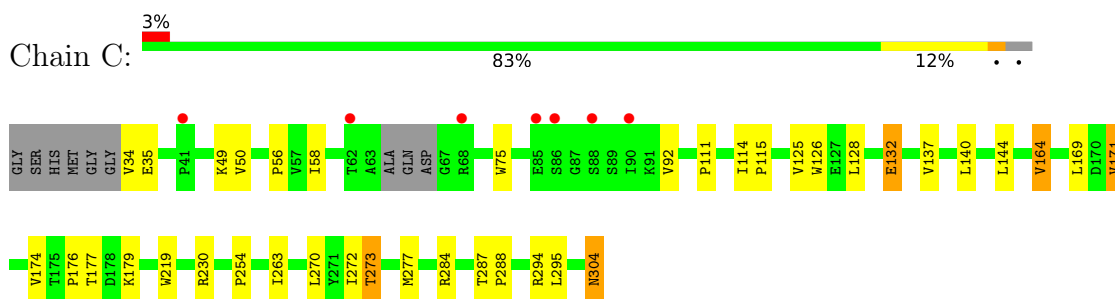
- Molecule 1: Major capsid protein VP1



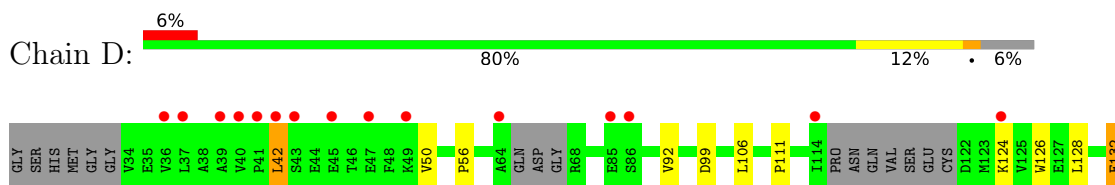
- Molecule 1: Major capsid protein VP1



- Molecule 1: Major capsid protein VP1

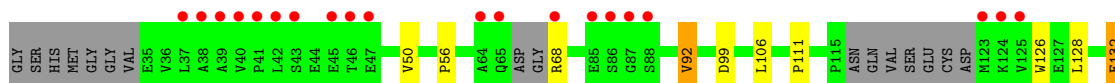
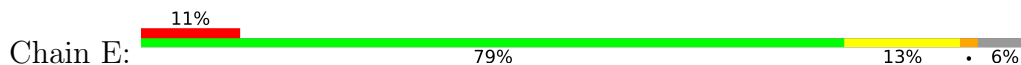


- Molecule 1: Major capsid protein VP1

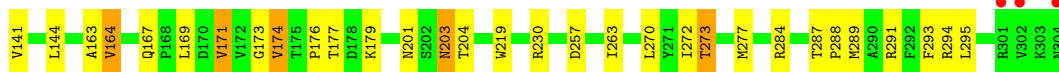
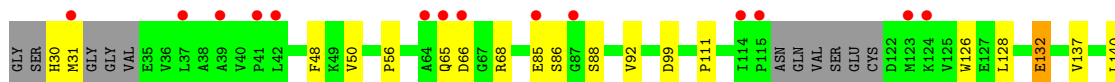
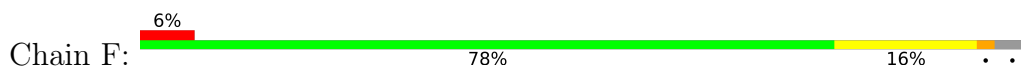




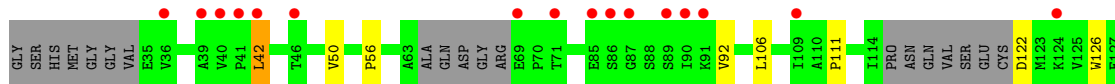
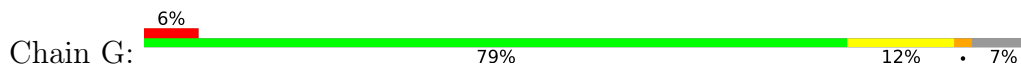
- Molecule 1: Major capsid protein VP1



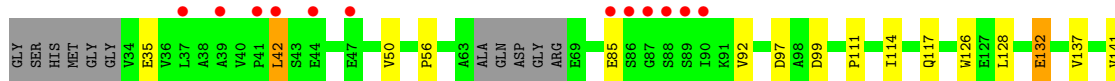
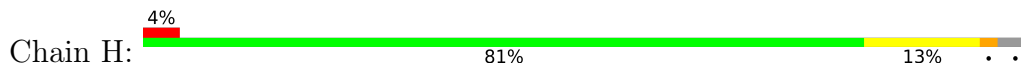
- Molecule 1: Major capsid protein VP1



- Molecule 1: Major capsid protein VP1

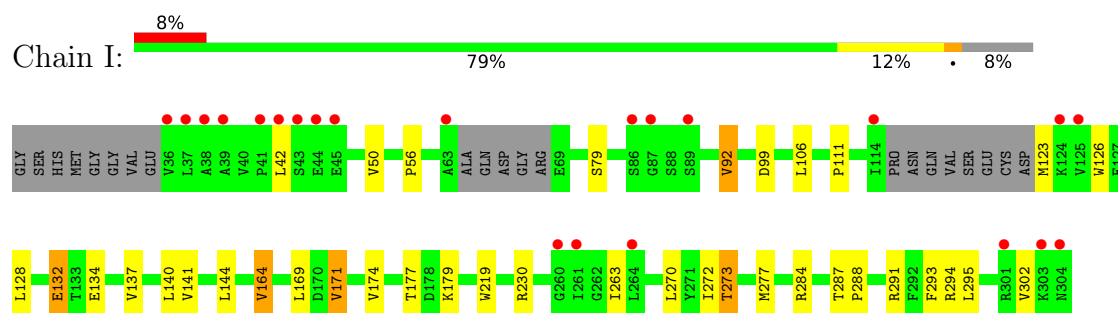


- Molecule 1: Major capsid protein VP1

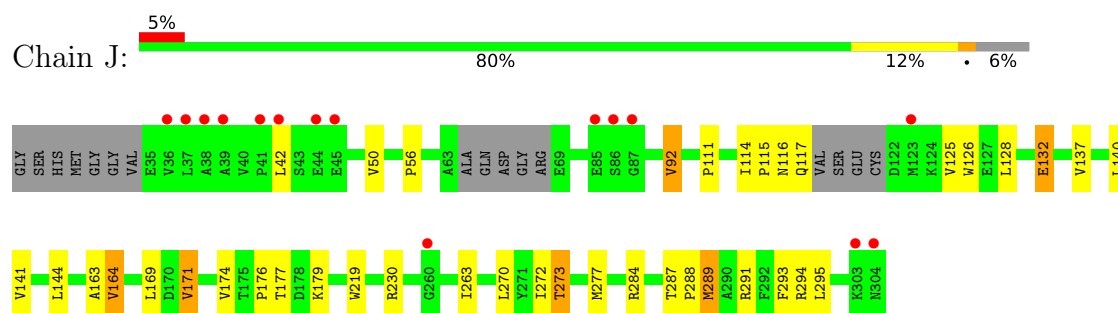




- Molecule 1: Major capsid protein VP1



- Molecule 1: Major capsid protein VP1



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	70.33Å 82.78Å 142.06Å 87.01° 98.23° 108.65°	Depositor
Resolution (Å)	49.27 – 2.55 49.26 – 2.55	Depositor EDS
% Data completeness (in resolution range)	95.9 (49.27-2.55) 95.9 (49.26-2.55)	Depositor EDS
$R_{merge}$	0.05	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.91 (at 2.54Å)	Xtrriage
Refinement program	REFMAC 5.5.0102	Depositor
R, $R_{free}$	0.202 , 0.219 0.213 , 0.233	Depositor DCC
$R_{free}$ test set	4647 reflections (4.94%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	56.4	Xtrriage
Anisotropy	0.366	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.33 , 48.4	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.95	EDS
Total number of atoms	20343	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	61.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.47% 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, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.43	0/2037	0.60	0/2783
1	B	0.46	0/2075	0.60	0/2837
1	C	0.46	0/2124	0.63	0/2903
1	D	0.44	0/2069	0.60	1/2826 (0.0%)
1	E	0.44	0/2068	0.60	0/2826
1	F	0.46	0/2113	0.62	0/2885
1	G	0.46	0/2045	0.61	0/2794
1	H	0.48	0/2101	0.63	0/2874
1	I	0.48	0/2029	0.62	0/2773
1	J	0.49	0/2074	0.62	0/2834
All	All	0.46	0/20735	0.61	1/28335 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	42	LEU	CA-CB-CG	5.10	127.04	115.30

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1987	0	1955	29	0
1	B	2024	0	1989	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	C	2072	0	2032	30	0
1	D	2019	0	1988	24	0
1	E	2017	0	1976	28	0
1	F	2061	0	2019	37	0
1	G	1995	0	1959	27	0
1	H	2049	0	2013	26	0
1	I	1979	0	1946	28	0
1	J	2023	0	1984	26	0
2	A	6	0	0	3	0
2	B	8	0	0	1	0
2	C	14	0	0	4	0
2	D	9	0	0	3	0
2	E	4	0	0	0	0
2	F	18	0	0	2	0
2	G	13	0	0	3	0
2	H	6	0	0	1	0
2	I	23	0	0	5	0
2	J	16	0	0	1	0
All	All	20343	0	19861	254	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 (254) 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:C:177:THR:HG22	1:C:179:LYS:H	1.13	1.13
1:B:177:THR:HG22	1:B:179:LYS:H	1.18	1.07
1:J:177:THR:HG22	1:J:179:LYS:H	1.12	1.06
1:G:177:THR:HG22	1:G:179:LYS:H	1.19	1.05
1:I:177:THR:HG22	1:I:179:LYS:H	1.20	1.04
1:H:177:THR:HG22	1:H:179:LYS:H	1.19	1.04
1:A:177:THR:HG22	1:A:179:LYS:H	1.20	1.02
1:F:177:THR:HG22	1:F:179:LYS:H	1.21	1.01
1:D:177:THR:HG22	1:D:179:LYS:H	1.19	1.00
1:E:177:THR:HG22	1:E:179:LYS:H	1.20	1.00
1:B:56:PRO:HB3	1:B:287:THR:HG21	1.44	0.99
1:H:56:PRO:HB3	1:H:287:THR:HG21	1.42	0.98
1:E:56:PRO:HB3	1:E:287:THR:HG21	1.46	0.98
1:F:56:PRO:HB3	1:F:287:THR:HG21	1.45	0.97
1:A:56:PRO:HB3	1:A:287:THR:HG21	1.45	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:56:PRO:HB3	1:I:287:THR:HG21	1.46	0.97
1:G:56:PRO:HB3	1:G:287:THR:HG21	1.46	0.95
1:J:56:PRO:HB3	1:J:287:THR:HG21	1.47	0.95
1:D:56:PRO:HB3	1:D:287:THR:HG21	1.46	0.95
1:C:56:PRO:HB3	1:C:287:THR:HG21	1.47	0.95
1:A:123:MET:HG2	1:A:124:LYS:H	1.32	0.91
1:G:56:PRO:CB	1:G:287:THR:HG21	2.01	0.90
1:A:56:PRO:CB	1:A:287:THR:HG21	2.01	0.90
1:H:56:PRO:CB	1:H:287:THR:HG21	2.02	0.89
1:C:56:PRO:CB	1:C:287:THR:HG21	2.02	0.89
1:C:49:LYS:HE3	2:C:306:HOH:O	1.71	0.89
1:C:34:VAL:HG12	1:C:35:GLU:H	1.37	0.88
1:J:56:PRO:CB	1:J:287:THR:HG21	2.02	0.88
1:E:56:PRO:CB	1:E:287:THR:HG21	2.03	0.88
1:F:56:PRO:CB	1:F:287:THR:HG21	2.04	0.87
1:I:56:PRO:CB	1:I:287:THR:HG21	2.04	0.86
1:B:56:PRO:CB	1:B:287:THR:HG21	2.05	0.85
1:F:287:THR:HG22	1:F:288:PRO:O	1.77	0.85
1:H:287:THR:HG22	1:H:288:PRO:O	1.76	0.85
1:D:56:PRO:CB	1:D:287:THR:HG21	2.06	0.85
1:J:287:THR:HG22	1:J:288:PRO:O	1.78	0.84
1:C:287:THR:HG22	1:C:288:PRO:O	1.78	0.83
1:D:287:THR:HG22	1:D:288:PRO:O	1.77	0.83
1:E:287:THR:HG22	1:E:288:PRO:O	1.79	0.82
1:I:287:THR:HG22	1:I:288:PRO:O	1.81	0.81
1:G:287:THR:HG22	1:G:288:PRO:O	1.80	0.81
1:B:287:THR:HG22	1:B:288:PRO:O	1.81	0.80
1:A:287:THR:HG22	1:A:288:PRO:O	1.82	0.79
1:E:269:ARG:HH21	1:F:68:ARG:HG2	1.46	0.79
1:I:273:THR:HG22	2:I:315:HOH:O	1.82	0.79
1:C:254:PRO:HD2	2:C:310:HOH:O	1.83	0.77
1:B:114:ILE:HB	1:B:117:GLN:HG2	1.66	0.76
1:C:177:THR:HG22	1:C:179:LYS:N	1.97	0.75
1:J:177:THR:HG22	1:J:179:LYS:N	1.96	0.74
1:C:277:MET:HE1	2:C:312:HOH:O	1.87	0.74
1:D:272:ILE:HD11	1:D:295:LEU:HD11	1.70	0.73
1:F:272:ILE:HD11	1:F:295:LEU:HD11	1.71	0.73
1:C:230:ARG:HG2	1:C:263:ILE:HD11	1.70	0.72
1:E:177:THR:HG22	1:E:179:LYS:N	2.03	0.72
1:G:177:THR:HG22	1:G:179:LYS:N	2.01	0.72
1:H:177:THR:HG22	1:H:179:LYS:N	2.01	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:272:ILE:HD11	1:H:295:LEU:HD11	1.73	0.71
1:B:177:THR:HG22	1:B:179:LYS:N	2.01	0.71
1:G:42:LEU:HD13	1:G:42:LEU:H	1.56	0.70
1:D:177:THR:HG22	1:D:179:LYS:N	2.02	0.69
1:F:201:ASN:OD1	1:F:203:ASN:HB2	1.92	0.69
1:E:272:ILE:HD11	1:E:295:LEU:HD11	1.74	0.69
1:C:272:ILE:HD11	1:C:295:LEU:HD11	1.73	0.69
1:G:272:ILE:HD11	1:G:295:LEU:HD11	1.74	0.69
1:J:272:ILE:HD11	1:J:295:LEU:HD11	1.74	0.69
1:I:272:ILE:HD11	1:I:295:LEU:HD11	1.75	0.68
1:A:272:ILE:HD11	1:A:295:LEU:HD11	1.76	0.68
1:B:65:GLN:HA	1:B:65:GLN:HE21	1.58	0.68
1:F:273:THR:HG22	2:F:306:HOH:O	1.95	0.67
2:I:309:HOH:O	1:J:92:VAL:HG13	1.95	0.67
2:H:310:HOH:O	1:I:92:VAL:HG13	1.95	0.66
1:B:272:ILE:HD11	1:B:295:LEU:HD11	1.76	0.66
1:A:123:MET:CG	1:A:124:LYS:H	2.08	0.65
1:J:56:PRO:HB3	1:J:287:THR:CG2	2.25	0.65
1:A:177:THR:HG22	1:A:179:LYS:N	2.03	0.65
1:F:273:THR:CG2	2:F:306:HOH:O	2.44	0.64
1:G:56:PRO:HB3	1:G:287:THR:CG2	2.24	0.64
1:I:177:THR:HG22	1:I:179:LYS:N	2.03	0.64
1:E:230:ARG:HG2	1:E:263:ILE:HD11	1.80	0.63
1:J:117:GLN:OE1	1:J:117:GLN:HA	1.97	0.63
1:J:230:ARG:HG2	1:J:263:ILE:HD11	1.82	0.62
1:C:56:PRO:HB3	1:C:287:THR:CG2	2.27	0.61
1:G:277:MET:CE	2:G:305:HOH:O	2.48	0.61
1:I:273:THR:CG2	2:I:315:HOH:O	2.42	0.61
2:A:306:HOH:O	1:B:92:VAL:HG13	1.99	0.61
1:E:56:PRO:HB3	1:E:287:THR:CG2	2.26	0.61
1:A:225:ARG:NH2	1:G:202:SER:O	2.33	0.61
1:C:34:VAL:HG12	1:C:35:GLU:N	2.14	0.60
1:A:56:PRO:HB3	1:A:287:THR:CG2	2.25	0.60
1:C:304:ASN:H	1:C:304:ASN:ND2	1.99	0.60
1:C:277:MET:CE	2:C:312:HOH:O	2.45	0.60
1:H:56:PRO:HB3	1:H:287:THR:CG2	2.24	0.59
1:A:123:MET:HG2	1:A:124:LYS:N	2.09	0.59
1:I:56:PRO:HB3	1:I:287:THR:CG2	2.27	0.58
1:D:56:PRO:HB3	1:D:287:THR:CG2	2.28	0.58
1:G:277:MET:HE1	2:G:305:HOH:O	2.02	0.58
2:A:307:HOH:O	1:E:134:GLU:HG2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:169:LEU:HB2	1:A:273:THR:HG21	1.86	0.58
1:F:177:THR:HG22	1:F:179:LYS:N	2.04	0.57
1:B:56:PRO:HB3	1:B:287:THR:CG2	2.28	0.57
1:H:42:LEU:H	1:H:42:LEU:HD22	1.69	0.57
1:D:287:THR:HG23	1:D:288:PRO:HD2	1.87	0.57
1:F:287:THR:HG23	1:F:288:PRO:HD2	1.88	0.56
1:B:287:THR:HG23	1:B:288:PRO:HD2	1.88	0.56
1:H:35:GLU:HB3	1:H:303:LYS:HB3	1.89	0.55
1:F:164:VAL:HG22	1:F:270:LEU:HD21	1.89	0.55
1:F:56:PRO:HB3	1:F:287:THR:CG2	2.27	0.55
1:J:169:LEU:HB2	1:J:273:THR:HG21	1.88	0.55
1:H:169:LEU:HB2	1:H:273:THR:HG21	1.87	0.55
1:I:169:LEU:HB2	1:I:273:THR:HG21	1.90	0.54
1:B:171:VAL:HG13	1:B:219:TRP:CE3	2.43	0.54
1:F:230:ARG:NH2	1:F:257:ASP:HB3	2.23	0.54
1:G:169:LEU:HB2	1:G:273:THR:HG21	1.91	0.53
1:A:164:VAL:HG22	1:A:270:LEU:HD21	1.90	0.53
1:I:164:VAL:HG22	1:I:270:LEU:HD21	1.89	0.53
1:D:164:VAL:HG22	1:D:270:LEU:HD21	1.91	0.53
1:F:169:LEU:HB2	1:F:273:THR:HG21	1.90	0.53
1:C:164:VAL:HG22	1:C:270:LEU:HD21	1.90	0.53
1:C:171:VAL:HG13	1:C:219:TRP:CE3	2.44	0.53
1:D:169:LEU:HB2	1:D:273:THR:HG21	1.89	0.52
1:E:164:VAL:HG22	1:E:270:LEU:HD21	1.91	0.52
1:E:169:LEU:HB2	1:E:273:THR:HG21	1.91	0.52
1:E:171:VAL:HG13	1:E:219:TRP:CE3	2.45	0.52
1:F:30:HIS:CE1	1:F:167:GLN:HG3	2.44	0.52
1:H:287:THR:HG23	1:H:288:PRO:HD2	1.90	0.52
1:A:171:VAL:HG13	1:A:219:TRP:CE3	2.45	0.52
1:F:171:VAL:HG13	1:F:219:TRP:CE3	2.45	0.52
1:B:164:VAL:HG22	1:B:270:LEU:HD21	1.91	0.51
1:B:169:LEU:HB2	1:B:273:THR:HG21	1.90	0.51
1:F:111:PRO:HB2	1:F:126:TRP:CD1	2.45	0.51
1:C:140:LEU:HD22	1:D:176:PRO:HB3	1.93	0.51
1:A:230:ARG:NH2	1:A:257:ASP:HB3	2.25	0.51
1:A:140:LEU:HD22	1:B:176:PRO:HB3	1.93	0.51
1:I:171:VAL:HG13	1:I:219:TRP:CE3	2.45	0.51
1:G:171:VAL:HG13	1:G:219:TRP:CE3	2.46	0.51
1:F:30:HIS:O	1:F:31:MET:HB2	2.11	0.50
2:I:22:HOH:O	1:J:230:ARG:HD2	2.11	0.50
1:H:171:VAL:HG13	1:H:219:TRP:CE3	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:287:THR:HG23	1:A:288:PRO:HD2	1.94	0.50
1:B:171:VAL:HG13	1:B:219:TRP:HE3	1.77	0.50
1:D:171:VAL:HG13	1:D:219:TRP:CE3	2.46	0.50
1:E:287:THR:HG23	1:E:288:PRO:HD2	1.93	0.50
1:F:140:LEU:HD22	1:G:176:PRO:HB3	1.94	0.50
1:I:230:ARG:HG2	1:I:263:ILE:HD11	1.93	0.49
1:H:141:VAL:HG21	1:I:277:MET:CE	2.42	0.49
1:I:134:GLU:HG2	2:J:309:HOH:O	2.11	0.49
1:H:230:ARG:HG2	1:H:263:ILE:HD11	1.94	0.49
1:J:171:VAL:HG13	1:J:219:TRP:CE3	2.47	0.49
1:A:171:VAL:HG13	1:A:219:TRP:HE3	1.78	0.49
1:F:132:GLU:HG2	1:F:294:ARG:HB3	1.96	0.48
1:I:171:VAL:HG13	1:I:219:TRP:HE3	1.78	0.48
1:A:111:PRO:HB2	1:A:126:TRP:CD1	2.49	0.48
1:A:176:PRO:HB3	1:E:140:LEU:HD22	1.95	0.48
1:G:287:THR:HG23	1:G:288:PRO:HD2	1.96	0.48
1:I:141:VAL:HG21	1:J:277:MET:CE	2.43	0.48
1:H:164:VAL:HG22	1:H:270:LEU:HD21	1.96	0.47
1:C:169:LEU:HB2	1:C:273:THR:HG21	1.95	0.47
1:C:287:THR:HG23	1:C:288:PRO:HD2	1.95	0.47
1:E:111:PRO:HB2	1:E:126:TRP:CD1	2.50	0.47
1:F:173:GLY:O	1:F:204:THR:HG23	2.15	0.47
1:F:171:VAL:HG13	1:F:219:TRP:HE3	1.80	0.47
1:F:291:ARG:HG2	1:F:293:PHE:CE1	2.50	0.47
1:I:287:THR:HG23	1:I:288:PRO:HD2	1.96	0.47
1:I:277:MET:HE1	2:I:310:HOH:O	2.14	0.47
1:D:230:ARG:HG2	1:D:263:ILE:HD11	1.96	0.47
2:D:305:HOH:O	1:E:92:VAL:HG13	2.15	0.47
1:J:164:VAL:HG22	1:J:270:LEU:HD21	1.97	0.47
1:D:163:ALA:HB3	1:D:273:THR:HG23	1.97	0.46
1:C:132:GLU:HG2	1:C:294:ARG:HB3	1.97	0.46
1:G:234:ARG:HD2	2:G:25:HOH:O	2.14	0.46
1:J:287:THR:HG23	1:J:288:PRO:HD2	1.96	0.46
1:G:164:VAL:HG22	1:G:270:LEU:HD21	1.98	0.46
1:G:291:ARG:HG2	1:G:293:PHE:CE1	2.51	0.46
1:B:291:ARG:HG2	1:B:293:PHE:CE1	2.51	0.46
1:C:171:VAL:HG13	1:C:219:TRP:HE3	1.79	0.46
1:G:230:ARG:HG2	1:G:263:ILE:HD11	1.98	0.46
1:H:201:ASN:H	1:H:204:THR:HG1	1.63	0.46
1:A:193:ASP:OD2	1:F:48:PHE:HD1	1.99	0.45
1:G:171:VAL:HG13	1:G:219:TRP:HE3	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:114:ILE:HA	1:C:115:PRO:HD3	1.74	0.45
1:H:171:VAL:HG13	1:H:219:TRP:HE3	1.82	0.45
1:D:111:PRO:HB2	1:D:126:TRP:CD1	2.52	0.45
1:E:171:VAL:HG13	1:E:219:TRP:HE3	1.79	0.45
1:B:111:PRO:HB2	1:B:126:TRP:CD1	2.52	0.45
1:B:132:GLU:HG2	1:B:294:ARG:HB3	1.97	0.45
1:J:111:PRO:HB2	1:J:126:TRP:CD1	2.52	0.45
1:F:176:PRO:HB3	1:J:140:LEU:HD22	1.98	0.45
1:H:132:GLU:HG2	1:H:294:ARG:HB3	1.98	0.45
1:D:171:VAL:HG13	1:D:219:TRP:HE3	1.80	0.45
1:J:132:GLU:HG2	1:J:294:ARG:HB3	1.99	0.45
1:H:163:ALA:HB3	1:H:273:THR:HG23	1.97	0.45
1:A:291:ARG:HG2	1:A:293:PHE:CE1	2.52	0.45
1:F:230:ARG:HG2	1:F:263:ILE:HD11	1.99	0.45
1:G:132:GLU:HG2	1:G:294:ARG:HB3	1.99	0.44
1:I:140:LEU:HD22	1:J:176:PRO:HB3	1.99	0.44
1:B:114:ILE:O	1:B:115:PRO:C	2.56	0.44
1:D:132:GLU:HG2	1:D:294:ARG:HB3	1.98	0.44
1:A:277:MET:HE1	2:A:309:HOH:O	2.17	0.44
1:E:269:ARG:NH2	1:F:68:ARG:HG2	2.24	0.44
1:G:111:PRO:HB2	1:G:126:TRP:CD1	2.53	0.44
1:H:111:PRO:HB2	1:H:126:TRP:CD1	2.52	0.44
1:D:141:VAL:HG21	1:E:277:MET:CE	2.47	0.44
1:I:132:GLU:HG2	1:I:294:ARG:HB3	2.00	0.44
1:A:132:GLU:HG2	1:A:294:ARG:HB3	2.00	0.44
2:B:306:HOH:O	1:C:230:ARG:HD2	2.18	0.44
1:E:173:GLY:O	1:E:204:THR:HG23	2.18	0.43
1:D:277:MET:HE1	2:D:308:HOH:O	2.18	0.43
1:F:65:GLN:HG3	1:F:68:ARG:HB2	2.00	0.43
1:B:140:LEU:HD22	1:C:176:PRO:HB3	1.99	0.43
1:B:141:VAL:HG21	1:C:277:MET:CE	2.48	0.43
1:C:111:PRO:HB2	1:C:126:TRP:CD1	2.53	0.43
1:B:147:THR:OG1	1:B:152:HIS:NE2	2.48	0.43
1:J:171:VAL:HG13	1:J:219:TRP:HE3	1.83	0.43
1:G:163:ALA:HB3	1:G:273:THR:HG23	2.00	0.43
1:G:140:LEU:HD22	1:H:176:PRO:HB3	2.01	0.43
1:E:132:GLU:HG2	1:E:294:ARG:HB3	2.00	0.43
1:F:277:MET:CE	1:J:141:VAL:HG21	2.48	0.43
1:H:141:VAL:HG21	1:I:277:MET:HE1	2.00	0.43
1:G:106:LEU:HD23	1:G:273:THR:HB	2.01	0.42
1:F:85:GLU:HG2	1:F:88:SER:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:270:LEU:HD22	1:C:295:LEU:HD13	2.02	0.42
1:E:291:ARG:HG2	1:E:293:PHE:CE1	2.54	0.42
1:F:65:GLN:CG	1:F:68:ARG:HB2	2.49	0.42
1:I:111:PRO:HB2	1:I:126:TRP:CD1	2.54	0.42
1:A:277:MET:HE1	1:E:141:VAL:HG21	2.01	0.42
1:I:123:MET:O	1:I:302:VAL:HG22	2.19	0.42
1:H:270:LEU:HD22	1:H:295:LEU:HD13	2.02	0.42
1:A:141:VAL:HG21	1:B:277:MET:CE	2.49	0.41
1:A:277:MET:CE	1:E:141:VAL:HG21	2.50	0.41
1:J:163:ALA:HB3	1:J:273:THR:HG23	2.01	0.41
1:H:114:ILE:O	1:H:117:GLN:HB2	2.19	0.41
1:H:230:ARG:NH2	1:H:257:ASP:HB3	2.36	0.41
1:F:141:VAL:HG21	1:G:277:MET:HE1	2.02	0.41
1:F:163:ALA:HB3	1:F:273:THR:HG23	2.02	0.41
1:H:97:ASP:HB3	1:H:99:ASP:HB2	2.03	0.41
1:I:79:SER:HB2	1:I:99:ASP:HB3	2.03	0.41
1:F:66:ASP:O	1:F:68:ARG:HD2	2.20	0.41
1:F:174:VAL:CG2	1:J:289:MET:HG2	2.51	0.41
1:E:106:LEU:HD23	1:E:273:THR:HB	2.02	0.41
1:A:106:LEU:HD23	1:A:273:THR:HB	2.03	0.41
1:D:106:LEU:HD23	1:D:273:THR:HB	2.03	0.41
1:D:124:LYS:HE2	1:D:301:ARG:HH22	1.86	0.41
1:F:141:VAL:HG21	1:G:277:MET:CE	2.51	0.41
1:I:106:LEU:HD23	1:I:273:THR:HB	2.03	0.41
1:I:291:ARG:HG2	1:I:293:PHE:CE1	2.56	0.41
1:D:140:LEU:HD22	1:E:176:PRO:HB3	2.01	0.41
1:J:114:ILE:HA	1:J:115:PRO:HD2	1.92	0.41
1:A:163:ALA:HB3	1:A:273:THR:HG23	2.03	0.40
1:C:58:ILE:HD12	1:C:75:TRP:HB2	2.03	0.40
1:C:304:ASN:H	1:C:304:ASN:HD22	1.69	0.40
1:D:277:MET:CE	2:D:308:HOH:O	2.69	0.40
1:J:291:ARG:HG2	1:J:293:PHE:CE1	2.57	0.40
1:D:291:ARG:HG2	1:D:293:PHE:CE1	2.56	0.40
1:E:163:ALA:HB3	1:E:273:THR:HG23	2.04	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	251/277 (91%)	242 (96%)	9 (4%)	0	100	100
1	B	256/277 (92%)	246 (96%)	10 (4%)	0	100	100
1	C	264/277 (95%)	254 (96%)	10 (4%)	0	100	100
1	D	255/277 (92%)	244 (96%)	10 (4%)	1 (0%)	34	46
1	E	255/277 (92%)	245 (96%)	9 (4%)	1 (0%)	34	46
1	F	260/277 (94%)	250 (96%)	8 (3%)	2 (1%)	19	27
1	G	252/277 (91%)	240 (95%)	12 (5%)	0	100	100
1	H	261/277 (94%)	248 (95%)	13 (5%)	0	100	100
1	I	250/277 (90%)	241 (96%)	8 (3%)	1 (0%)	34	46
1	J	255/277 (92%)	245 (96%)	9 (4%)	1 (0%)	34	46
All	All	2559/2770 (92%)	2455 (96%)	98 (4%)	6 (0%)	47	60

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	F	86	SER
1	F	99	ASP
1	J	42	LEU
1	D	99	ASP
1	E	99	ASP
1	I	42	LEU

### 5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	220/236 (93%)	209 (95%)	11 (5%)	24	33
1	B	223/236 (94%)	208 (93%)	15 (7%)	16	21
1	C	230/236 (98%)	217 (94%)	13 (6%)	20	27
1	D	223/236 (94%)	208 (93%)	15 (7%)	16	21
1	E	222/236 (94%)	209 (94%)	13 (6%)	19	25
1	F	228/236 (97%)	215 (94%)	13 (6%)	20	27
1	G	221/236 (94%)	206 (93%)	15 (7%)	16	20
1	H	229/236 (97%)	214 (93%)	15 (7%)	16	22
1	I	219/236 (93%)	208 (95%)	11 (5%)	24	33
1	J	225/236 (95%)	211 (94%)	14 (6%)	18	24
All	All	2240/2360 (95%)	2105 (94%)	135 (6%)	19	25

All (135) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	50	VAL
1	A	92	VAL
1	A	128	LEU
1	A	132	GLU
1	A	137	VAL
1	A	144	LEU
1	A	164	VAL
1	A	171	VAL
1	A	174	VAL
1	A	273	THR
1	A	284	ARG
1	B	45	GLU
1	B	50	VAL
1	B	65	GLN
1	B	92	VAL
1	B	128	LEU
1	B	132	GLU
1	B	137	VAL
1	B	144	LEU
1	B	164	VAL
1	B	171	VAL
1	B	174	VAL
1	B	273	THR
1	B	284	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	289	MET
1	B	301	ARG
1	C	50	VAL
1	C	92	VAL
1	C	125	VAL
1	C	128	LEU
1	C	132	GLU
1	C	137	VAL
1	C	144	LEU
1	C	164	VAL
1	C	171	VAL
1	C	174	VAL
1	C	273	THR
1	C	284	ARG
1	C	304	ASN
1	D	42	LEU
1	D	50	VAL
1	D	92	VAL
1	D	128	LEU
1	D	132	GLU
1	D	137	VAL
1	D	144	LEU
1	D	164	VAL
1	D	171	VAL
1	D	174	VAL
1	D	273	THR
1	D	284	ARG
1	D	289	MET
1	D	301	ARG
1	D	304	ASN
1	E	50	VAL
1	E	68	ARG
1	E	92	VAL
1	E	128	LEU
1	E	132	GLU
1	E	137	VAL
1	E	144	LEU
1	E	164	VAL
1	E	171	VAL
1	E	174	VAL
1	E	273	THR
1	E	284	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	E	301	ARG
1	F	50	VAL
1	F	92	VAL
1	F	128	LEU
1	F	132	GLU
1	F	137	VAL
1	F	144	LEU
1	F	164	VAL
1	F	171	VAL
1	F	174	VAL
1	F	203	ASN
1	F	273	THR
1	F	284	ARG
1	F	289	MET
1	G	42	LEU
1	G	50	VAL
1	G	92	VAL
1	G	122	ASP
1	G	128	LEU
1	G	132	GLU
1	G	137	VAL
1	G	144	LEU
1	G	164	VAL
1	G	171	VAL
1	G	174	VAL
1	G	273	THR
1	G	284	ARG
1	G	289	MET
1	G	301	ARG
1	H	42	LEU
1	H	50	VAL
1	H	85	GLU
1	H	92	VAL
1	H	128	LEU
1	H	132	GLU
1	H	137	VAL
1	H	144	LEU
1	H	164	VAL
1	H	171	VAL
1	H	174	VAL
1	H	273	THR
1	H	284	ARG

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Mol	Chain	Res	Type
1	H	289	MET
1	H	303	LYS
1	I	50	VAL
1	I	92	VAL
1	I	128	LEU
1	I	132	GLU
1	I	137	VAL
1	I	144	LEU
1	I	164	VAL
1	I	171	VAL
1	I	174	VAL
1	I	273	THR
1	I	284	ARG
1	J	50	VAL
1	J	92	VAL
1	J	116	ASN
1	J	125	VAL
1	J	128	LEU
1	J	132	GLU
1	J	137	VAL
1	J	144	LEU
1	J	164	VAL
1	J	171	VAL
1	J	174	VAL
1	J	273	THR
1	J	284	ARG
1	J	289	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	142	ASN
1	A	286	HIS
1	B	65	GLN
1	B	142	ASN
1	B	286	HIS
1	C	142	ASN
1	C	304	ASN
1	D	142	ASN
1	D	286	HIS
1	D	304	ASN
1	E	142	ASN

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Mol	Chain	Res	Type
1	E	286	HIS
1	F	142	ASN
1	F	286	HIS
1	G	142	ASN
1	G	286	HIS
1	H	142	ASN
1	H	286	HIS
1	I	142	ASN
1	J	142	ASN
1	J	286	HIS

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

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

There are no ligands in this entry.

### 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	257/277 (92%)	0.50	11 (4%) 35 42	40, 61, 94, 127	0
1	B	262/277 (94%)	0.28	6 (2%) 60 67	38, 60, 87, 114	0
1	C	268/277 (96%)	0.28	7 (2%) 56 62	38, 56, 82, 99	0
1	D	261/277 (94%)	0.46	16 (6%) 21 25	39, 64, 100, 115	0
1	E	261/277 (94%)	0.62	30 (11%) 4 6	39, 62, 97, 130	0
1	F	266/277 (96%)	0.43	17 (6%) 19 22	37, 58, 95, 124	0
1	G	258/277 (93%)	0.53	17 (6%) 18 21	36, 60, 93, 127	0
1	H	265/277 (95%)	0.37	12 (4%) 33 40	36, 60, 97, 121	0
1	I	256/277 (92%)	0.44	22 (8%) 10 12	35, 55, 88, 114	0
1	J	261/277 (94%)	0.46	15 (5%) 23 28	35, 56, 87, 116	0
All	All	2615/2770 (94%)	0.44	153 (5%) 22 26	35, 59, 95, 130	0

All (153) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	42	LEU	6.3
1	E	64	ALA	6.1
1	A	304	ASN	5.5
1	E	41	PRO	5.5
1	A	37	LEU	5.4
1	G	89	SER	5.4
1	J	304	ASN	5.1
1	I	304	ASN	5.1
1	A	42	LEU	5.1
1	D	41	PRO	4.9
1	G	41	PRO	4.9
1	E	42	LEU	4.7
1	F	302	VAL	4.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	D	39	ALA	4.5
1	E	304	ASN	4.4
1	E	37	LEU	4.4
1	J	41	PRO	4.3
1	E	266	LEU	4.2
1	F	42	LEU	4.2
1	F	64	ALA	4.1
1	G	86	SER	4.1
1	G	87	GLY	4.0
1	E	40	VAL	4.0
1	J	39	ALA	3.9
1	F	37	LEU	3.9
1	E	125	VAL	3.9
1	A	302	VAL	3.9
1	D	85	GLU	3.9
1	H	39	ALA	3.9
1	I	41	PRO	3.9
1	E	38	ALA	3.8
1	E	88	SER	3.8
1	B	39	ALA	3.7
1	C	41	PRO	3.7
1	G	90	ILE	3.7
1	E	303	LYS	3.6
1	D	114	ILE	3.6
1	G	124	LYS	3.6
1	I	42	LEU	3.5
1	J	37	LEU	3.5
1	D	86	SER	3.5
1	J	44	GLU	3.5
1	E	43	SER	3.5
1	H	87	GLY	3.5
1	F	115	PRO	3.4
1	C	90	ILE	3.4
1	I	37	LEU	3.4
1	E	87	GLY	3.3
1	J	86	SER	3.3
1	E	46	THR	3.3
1	I	87	GLY	3.3
1	G	40	VAL	3.3
1	I	36	VAL	3.3
1	A	109	ILE	3.3
1	C	68	ARG	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	D	49	LYS	3.3
1	B	90	ILE	3.2
1	H	89	SER	3.2
1	I	43	SER	3.2
1	I	86	SER	3.2
1	H	85	GLU	3.1
1	A	36	VAL	3.1
1	A	41	PRO	3.1
1	F	301	ARG	3.1
1	I	303	LYS	3.1
1	G	304	ASN	3.1
1	F	87	GLY	3.0
1	H	41	PRO	3.0
1	J	87	GLY	3.0
1	E	261	ILE	3.0
1	H	42	LEU	3.0
1	J	42	LEU	2.9
1	D	45	GLU	2.9
1	E	264	LEU	2.9
1	E	85	GLU	2.9
1	J	45	GLU	2.9
1	G	42	LEU	2.9
1	I	63	ALA	2.9
1	I	44	GLU	2.8
1	H	86	SER	2.8
1	D	124	LYS	2.8
1	J	303	LYS	2.8
1	J	38	ALA	2.7
1	D	36	VAL	2.7
1	B	87	GLY	2.7
1	I	264	LEU	2.7
1	I	39	ALA	2.7
1	D	43	SER	2.7
1	B	86	SER	2.7
1	I	45	GLU	2.6
1	E	165	GLY	2.6
1	E	124	LYS	2.6
1	D	64	ALA	2.6
1	J	123	MET	2.6
1	G	85	GLU	2.6
1	D	40	VAL	2.6
1	J	85	GLU	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	E	300	ARG	2.6
1	G	36	VAL	2.6
1	E	68	ARG	2.6
1	E	86	SER	2.6
1	A	44	GLU	2.5
1	E	39	ALA	2.5
1	F	66	ASP	2.5
1	G	91	LYS	2.5
1	A	87	GLY	2.5
1	I	125	VAL	2.5
1	C	86	SER	2.5
1	E	123	MET	2.5
1	I	38	ALA	2.5
1	E	269	ARG	2.4
1	G	39	ALA	2.4
1	J	36	VAL	2.4
1	A	303	LYS	2.4
1	G	69	GLU	2.4
1	I	124	LYS	2.3
1	I	261	ILE	2.3
1	G	46	THR	2.3
1	A	148	ASN	2.3
1	E	301	ARG	2.3
1	H	44	GLU	2.3
1	B	123	MET	2.3
1	G	109	ILE	2.3
1	G	71	THR	2.3
1	H	88	SER	2.3
1	F	85	GLU	2.3
1	F	31	MET	2.3
1	E	302	VAL	2.3
1	H	90	ILE	2.3
1	F	123	MET	2.2
1	D	302	VAL	2.2
1	F	304	ASN	2.2
1	J	260	GLY	2.2
1	F	114	ILE	2.2
1	D	47	GLU	2.2
1	I	89	SER	2.2
1	B	42	LEU	2.2
1	D	37	LEU	2.2
1	I	301	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
1	C	62	THR	2.1
1	F	65	GLN	2.1
1	E	65	GLN	2.1
1	E	45	GLU	2.1
1	E	47	GLU	2.1
1	I	114	ILE	2.1
1	H	37	LEU	2.1
1	I	260	GLY	2.0
1	C	85	GLU	2.0
1	F	41	PRO	2.0
1	F	39	ALA	2.0
1	F	124	LYS	2.0
1	C	88	SER	2.0
1	H	47	GLU	2.0

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

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

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

There are no ligands in this entry.

## 6.5 Other polymers [i](#)

There are no such residues in this entry.