



# Full wwPDB X-ray Structure Validation Report ⓘ

Dec 9, 2023 – 08:07 am GMT

PDB ID : 2WCT  
Title : human SARS coronavirus unique domain (triclinic form)  
Authors : Tan, J.; Vonrhein, C.; Smart, O.S.; Bricogne, G.; Bollati, M.; Hansen, G.;  
Mesters, J.R.; Hilgenfeld, R.  
Deposited on : 2009-03-16  
Resolution : 2.79 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

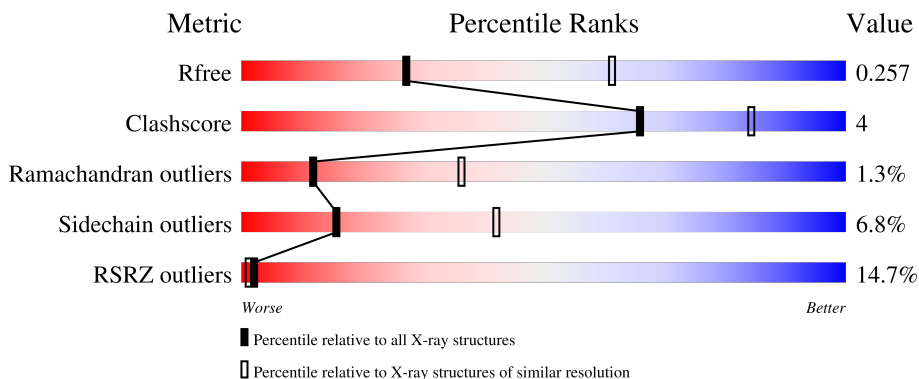
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.79 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	3140 (2.80-2.80)
Clashscore	141614	3569 (2.80-2.80)
Ramachandran outliers	138981	3498 (2.80-2.80)
Sidechain outliers	138945	3500 (2.80-2.80)
RSRZ outliers	127900	3078 (2.80-2.80)

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	264	 13% 80% 16% . .
1	B	264	 14% 81% 16% . .
1	C	264	 15% 79% 15% . 5%
1	D	264	 14% 78% 15% . 6%

## 2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 7849 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 NON-STRUCTURAL PROTEIN 3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	257	1991	1268	326	381	16	0	0	0
1	B	257	1991	1268	326	381	16	0	0	0
1	C	252	1954	1246	321	371	16	0	0	0
1	D	248	1908	1214	316	362	16	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	628	ARG	LYS	conflict	UNP P0C6U8
B	628	ARG	LYS	conflict	UNP P0C6U8
C	628	ARG	LYS	conflict	UNP P0C6U8
D	628	ARG	LYS	conflict	UNP P0C6U8

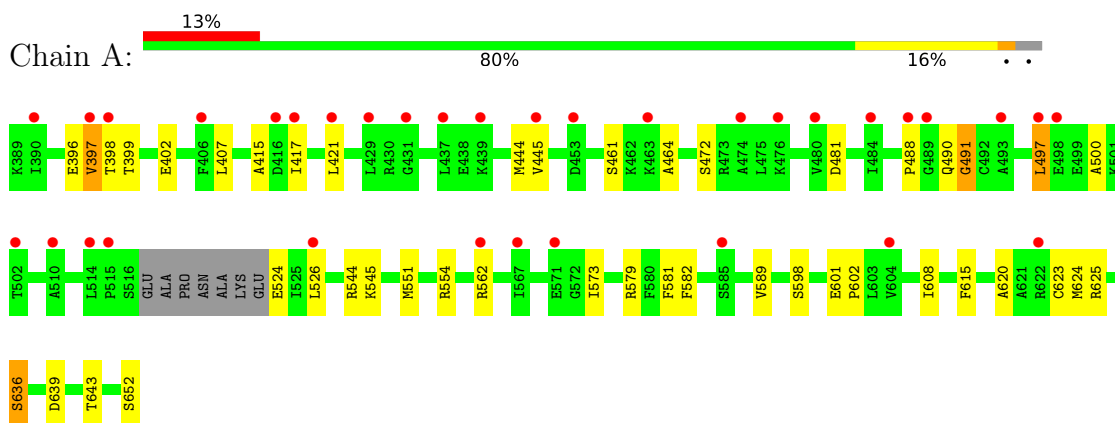
- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	3	Total 3	O 3	0	0
2	C	1	Total 1	O 1	0	0
2	D	1	Total 1	O 1	0	0

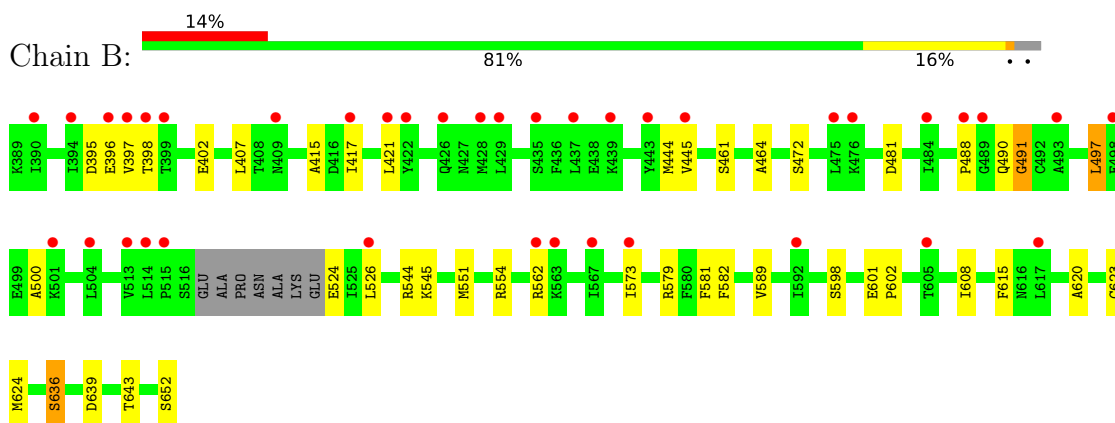
### 3 Residue-property plots [i](#)

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.

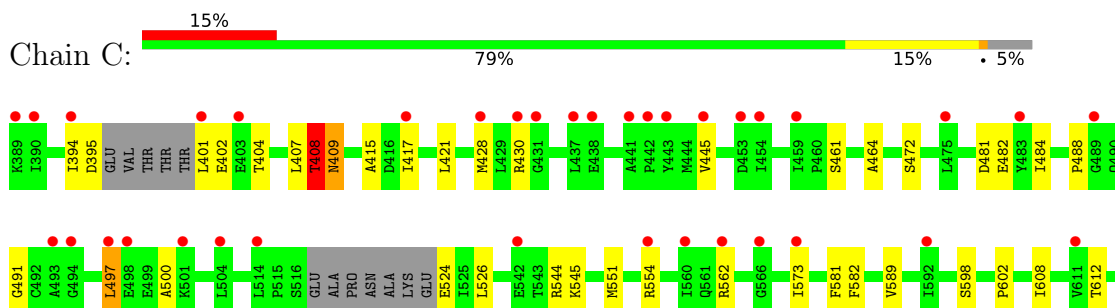
#### • Molecule 1: NON-STRUCTURAL PROTEIN 3

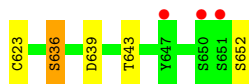


#### • Molecule 1: NON-STRUCTURAL PROTEIN 3

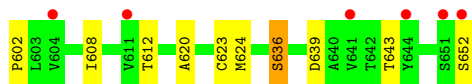
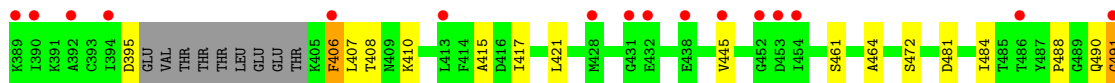
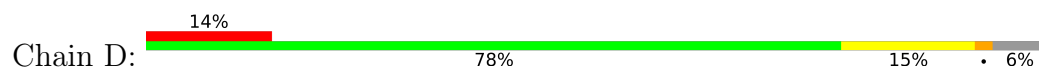


#### • Molecule 1: NON-STRUCTURAL PROTEIN 3





● Molecule 1: NON-STRUCTURAL PROTEIN 3



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	68.68Å 75.52Å 80.54Å 77.16° 75.61° 74.48°	Depositor
Resolution (Å)	33.33 – 2.79 33.33 – 2.80	Depositor EDS
% Data completeness (in resolution range)	92.2 (33.33-2.79) 73.7 (33.33-2.80)	Depositor EDS
$R_{merge}$	0.08	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.10 (at 2.81Å)	Xtrriage
Refinement program	BUSTER-TNT 2.7.0	Depositor
R, $R_{free}$	0.223 , 0.240 0.240 , 0.257	Depositor DCC
$R_{free}$ test set	1652 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	64.0	Xtrriage
Anisotropy	0.306	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.35 , 47.2	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.42$ , $\langle L^2 \rangle = 0.25$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.91	EDS
Total number of atoms	7849	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	76.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.32% 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	0.50	0/2025	0.70	0/2736
1	B	0.51	0/2025	0.71	0/2736
1	C	0.49	0/1987	0.73	1/2681 (0.0%)
1	D	0.49	0/1940	0.72	0/2619
All	All	0.49	0/7977	0.71	1/10772 (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	C	408	THR	C-N-CA	6.26	137.34	121.70

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	1991	0	2031	17	0
1	B	1991	0	2031	15	0
1	C	1954	0	1994	18	0
1	D	1908	0	1937	16	0
2	A	3	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
All	All	7849	0	7993	64	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 4.

All (64) 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:394:ILE:HG12	1:C:404:THR:HG21	1.50	0.93
1:D:497:LEU:H	1:D:652:SER:HB3	1.61	0.64
1:A:497:LEU:H	1:A:652:SER:HB3	1.63	0.64
1:C:497:LEU:H	1:C:652:SER:HB3	1.62	0.63
1:D:408:THR:HG23	1:D:484:ILE:HD11	1.80	0.62
1:D:417:ILE:HD11	1:D:445:VAL:HG23	1.82	0.61
1:C:417:ILE:HD11	1:C:445:VAL:HG23	1.82	0.60
1:B:497:LEU:H	1:B:652:SER:HB3	1.67	0.60
1:A:417:ILE:HD11	1:A:445:VAL:HG23	1.82	0.60
1:B:417:ILE:HD11	1:B:445:VAL:HG23	1.84	0.59
1:C:394:ILE:HG12	1:C:404:THR:CG2	2.32	0.55
1:C:408:THR:HA	1:C:409:ASN:HB2	1.90	0.54
1:C:401:LEU:HD23	1:C:430:ARG:HE	1.73	0.53
1:A:545:LYS:HG2	1:A:602:PRO:HB2	1.95	0.49
1:B:545:LYS:HG2	1:B:602:PRO:HB2	1.95	0.48
1:C:401:LEU:HD21	1:C:428:MET:O	2.13	0.48
1:C:408:THR:HG23	1:C:484:ILE:HD11	1.96	0.47
1:D:406:PHE:HA	1:D:407:LEU:HA	1.56	0.47
1:D:545:LYS:HG2	1:D:602:PRO:HB2	1.96	0.47
1:C:545:LYS:HG2	1:C:602:PRO:HB2	1.97	0.47
1:D:488:PRO:HD2	1:D:500:ALA:HB1	1.98	0.46
1:C:488:PRO:HD2	1:C:500:ALA:HB1	1.99	0.45
1:B:415:ALA:HB2	1:B:421:LEU:HD23	1.98	0.45
1:C:408:THR:O	1:C:484:ILE:HD11	2.16	0.45
1:A:415:ALA:HB2	1:A:421:LEU:HD23	1.99	0.45
1:A:551:MET:HG3	1:A:582:PHE:HB3	1.99	0.45
1:C:415:ALA:HB2	1:C:421:LEU:HD23	1.98	0.45
1:C:461:SER:HB3	1:C:464:ALA:HB3	1.99	0.45
1:A:488:PRO:HD2	1:A:500:ALA:HB1	1.98	0.44
1:D:415:ALA:HB2	1:D:421:LEU:HD23	1.98	0.44
1:B:551:MET:HG3	1:B:582:PHE:HB3	2.00	0.44
1:C:551:MET:HG3	1:C:582:PHE:HB3	1.99	0.44
1:B:573:ILE:HD13	1:B:581:PHE:HD1	1.83	0.44
1:B:461:SER:HB3	1:B:464:ALA:HB3	1.99	0.44
1:D:461:SER:HB3	1:D:464:ALA:HB3	1.99	0.44
1:C:573:ILE:HD13	1:C:581:PHE:HD1	1.83	0.44
1:A:573:ILE:HD13	1:A:581:PHE:HD1	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:490:GLN:HA	1:D:491:GLY:HA2	1.80	0.43
1:D:573:ILE:HD13	1:D:581:PHE:HD1	1.83	0.43
1:D:551:MET:HG3	1:D:582:PHE:HB3	1.99	0.43
1:B:490:GLN:HA	1:B:491:GLY:HA2	1.85	0.43
1:B:488:PRO:HD2	1:B:500:ALA:HB1	2.00	0.43
1:C:589:VAL:HG13	1:C:608:ILE:HG22	2.01	0.42
1:A:461:SER:HB3	1:A:464:ALA:HB3	2.01	0.42
1:A:490:GLN:HA	1:A:491:GLY:HA2	1.84	0.42
1:B:589:VAL:HG21	1:B:615:PHE:CE2	2.55	0.42
1:A:579:ARG:NH1	1:A:601:GLU:OE2	2.53	0.42
1:B:579:ARG:NH1	1:B:601:GLU:OE2	2.53	0.41
1:D:589:VAL:HG13	1:D:608:ILE:HG22	2.02	0.41
1:A:524:GLU:HG3	1:A:526:LEU:H	1.85	0.41
1:A:625:ARG:HH12	1:A:652:SER:HB2	1.86	0.41
1:B:524:GLU:HG3	1:B:526:LEU:H	1.86	0.41
1:A:589:VAL:HG13	1:A:608:ILE:HG22	2.03	0.41
1:B:620:ALA:O	1:B:624:MET:HG2	2.20	0.41
1:A:397:VAL:HA	1:A:398:THR:HA	1.80	0.41
1:A:620:ALA:O	1:A:624:MET:HG2	2.21	0.41
1:D:524:GLU:HG3	1:D:526:LEU:H	1.85	0.41
1:A:444:MET:HG2	1:D:612:THR:HA	2.03	0.40
1:A:589:VAL:HG21	1:A:615:PHE:CE2	2.56	0.40
1:B:444:MET:HG2	1:C:612:THR:HA	2.03	0.40
1:C:524:GLU:HG3	1:C:526:LEU:H	1.86	0.40
1:D:620:ALA:O	1:D:624:MET:HG2	2.21	0.40
1:B:589:VAL:HG13	1:B:608:ILE:HG22	2.04	0.40
1:D:579:ARG:NH1	1:D:601:GLU:OE2	2.52	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	253/264 (96%)	239 (94%)	12 (5%)	2 (1%)	19	49
1	B	253/264 (96%)	238 (94%)	12 (5%)	3 (1%)	13	39
1	C	246/264 (93%)	232 (94%)	10 (4%)	4 (2%)	9	31
1	D	242/264 (92%)	227 (94%)	11 (4%)	4 (2%)	9	29
All	All	994/1056 (94%)	936 (94%)	45 (4%)	13 (1%)	12	36

All (13) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	409	ASN
1	A	636	SER
1	D	406	PHE
1	D	410	LYS
1	B	398	THR
1	B	636	SER
1	C	408	THR
1	C	636	SER
1	D	636	SER
1	A	491	GLY
1	B	491	GLY
1	C	491	GLY
1	D	491	GLY

### 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	222/227 (98%)	206 (93%)	16 (7%)	14	38
1	B	222/227 (98%)	206 (93%)	16 (7%)	14	38
1	C	217/227 (96%)	202 (93%)	15 (7%)	15	41
1	D	210/227 (92%)	198 (94%)	12 (6%)	20	50
All	All	871/908 (96%)	812 (93%)	59 (7%)	16	42

All (59) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	396	GLU
1	A	397	VAL
1	A	399	THR
1	A	402	GLU
1	A	407	LEU
1	A	472	SER
1	A	481	ASP
1	A	497	LEU
1	A	544	ARG
1	A	554	ARG
1	A	562	ARG
1	A	598	SER
1	A	623	CYS
1	A	636	SER
1	A	639	ASP
1	A	643	THR
1	B	395	ASP
1	B	396	GLU
1	B	397	VAL
1	B	402	GLU
1	B	407	LEU
1	B	472	SER
1	B	481	ASP
1	B	497	LEU
1	B	544	ARG
1	B	554	ARG
1	B	562	ARG
1	B	598	SER
1	B	623	CYS
1	B	636	SER
1	B	639	ASP
1	B	643	THR
1	C	395	ASP
1	C	402	GLU
1	C	407	LEU
1	C	472	SER
1	C	481	ASP
1	C	482	GLU
1	C	497	LEU
1	C	544	ARG
1	C	554	ARG
1	C	562	ARG
1	C	598	SER

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Mol	Chain	Res	Type
1	C	623	CYS
1	C	636	SER
1	C	639	ASP
1	C	643	THR
1	D	395	ASP
1	D	472	SER
1	D	481	ASP
1	D	497	LEU
1	D	544	ARG
1	D	554	ARG
1	D	562	ARG
1	D	598	SER
1	D	623	CYS
1	D	636	SER
1	D	639	ASP
1	D	643	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	409	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 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	257/264 (97%)	1.02	34 (13%) 3 2	44, 69, 109, 127	0
1	B	257/264 (97%)	1.07	38 (14%) 2 1	46, 75, 114, 124	0
1	C	252/264 (95%)	1.17	39 (15%) 2 1	47, 74, 106, 124	0
1	D	248/264 (93%)	1.11	38 (15%) 2 1	46, 78, 108, 131	0
All	All	1014/1056 (96%)	1.09	149 (14%) 2 1	44, 74, 110, 131	0

All (149) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	389	LYS	6.6
1	D	651	SER	6.2
1	D	494	GLY	5.5
1	C	431	GLY	5.4
1	D	389	LYS	5.3
1	B	398	THR	5.0
1	C	443	TYR	4.8
1	D	406	PHE	4.5
1	D	491	GLY	4.4
1	B	397	VAL	4.3
1	A	488	PRO	4.3
1	B	439	LYS	4.2
1	B	513	VAL	4.2
1	D	431	GLY	4.1
1	A	493	ALA	4.0
1	C	562	ARG	3.9
1	C	401	LEU	3.9
1	D	486	THR	3.9
1	D	652	SER	3.9
1	C	494	GLY	3.8
1	B	488	PRO	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	C	453	ASP	3.8
1	B	493	ALA	3.7
1	D	390	ILE	3.7
1	C	651	SER	3.7
1	B	443	TYR	3.6
1	A	398	THR	3.6
1	C	514	LEU	3.6
1	B	394	ILE	3.6
1	C	504	LEU	3.6
1	C	454	ILE	3.6
1	A	562	ARG	3.5
1	B	445	VAL	3.5
1	A	437	LEU	3.5
1	D	497	LEU	3.5
1	A	489	GLY	3.5
1	C	497	LEU	3.3
1	C	441	ALA	3.3
1	B	435	SER	3.3
1	D	492	CYS	3.2
1	A	390	ILE	3.2
1	A	476	LYS	3.2
1	C	394	ILE	3.1
1	D	514	LEU	3.1
1	B	390	ILE	3.1
1	B	409	ASN	3.0
1	C	417	ILE	3.0
1	D	394	ILE	3.0
1	C	493	ALA	3.0
1	D	560	ILE	2.9
1	D	611	VAL	2.9
1	A	406	PHE	2.9
1	A	429	LEU	2.9
1	D	392	ALA	2.8
1	D	592	ILE	2.8
1	D	493	ALA	2.8
1	D	453	ASP	2.8
1	C	554	ARG	2.8
1	A	439	LYS	2.7
1	A	416	ASP	2.7
1	B	484	ILE	2.7
1	C	428	MET	2.7
1	C	459	ILE	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	B	515	PRO	2.7
1	D	452	GLY	2.7
1	D	413	LEU	2.6
1	D	432	GLU	2.6
1	B	562	ARG	2.6
1	A	604	VAL	2.6
1	A	445	VAL	2.6
1	C	445	VAL	2.5
1	D	504	LEU	2.5
1	D	428	MET	2.5
1	A	397	VAL	2.5
1	A	463	LYS	2.5
1	C	430	ARG	2.5
1	A	431	GLY	2.5
1	A	502	THR	2.5
1	B	498	GLU	2.5
1	C	611	VAL	2.5
1	B	426	GLN	2.5
1	D	594	THR	2.5
1	C	592	ILE	2.5
1	A	480	VAL	2.5
1	C	566	GLY	2.4
1	B	399	THR	2.4
1	C	390	ILE	2.4
1	B	429	LEU	2.4
1	A	453	ASP	2.4
1	C	647	TYR	2.4
1	B	514	LEU	2.4
1	D	499	GLU	2.4
1	C	442	PRO	2.3
1	B	605	THR	2.3
1	C	438	GLU	2.3
1	B	476	LYS	2.3
1	D	454	ILE	2.3
1	D	562	ARG	2.3
1	B	428	MET	2.3
1	B	422	TYR	2.3
1	B	396	GLU	2.3
1	C	650	SER	2.2
1	A	571	GLU	2.2
1	B	501	LYS	2.2
1	D	564	TYR	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	B	504	LEU	2.2
1	B	417	ILE	2.2
1	A	417	ILE	2.2
1	D	438	GLU	2.2
1	B	489	GLY	2.2
1	C	573	ILE	2.2
1	A	474	ALA	2.2
1	B	421	LEU	2.2
1	C	498	GLU	2.1
1	D	445	VAL	2.1
1	D	641	VAL	2.1
1	A	526	LEU	2.1
1	A	510	ALA	2.1
1	B	563	LYS	2.1
1	A	421	LEU	2.1
1	A	497	LEU	2.1
1	B	573	ILE	2.1
1	A	515	PRO	2.1
1	A	622	ARG	2.1
1	C	489	GLY	2.1
1	A	498	GLU	2.1
1	B	526	LEU	2.1
1	B	617	LEU	2.1
1	C	437	LEU	2.1
1	C	560	ILE	2.1
1	C	501	LYS	2.1
1	D	516	SER	2.1
1	D	534	ARG	2.1
1	B	592	ILE	2.1
1	C	542	GLU	2.1
1	A	484	ILE	2.1
1	A	567	ILE	2.1
1	B	567	ILE	2.1
1	D	604	VAL	2.1
1	D	644	TYR	2.1
1	B	437	LEU	2.0
1	C	475	LEU	2.0
1	A	514	LEU	2.0
1	C	403	GLU	2.0
1	D	585	SER	2.0
1	D	571	GLU	2.0
1	C	483	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	585	SER	2.0
1	B	475	LEU	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.