



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 13, 2017 – 03:51 am GMT

PDB ID : 2Q1S  
Title : Crystal structure of the Bordetella bronchiseptica enzyme WbmF in complex with NADH  
Authors : Harmer, N.J.; King, J.D.; Palmer, C.M.; Maskell, D.; Blundell, T.L.  
Deposited on : 2007-05-25  
Resolution : 1.50 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467  
Mogul : 1.7.2 (RC1), CSD as538be (2017)  
Xtriage (Phenix) : 1.9-1692  
EDS : trunk28620  
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : recalc28949

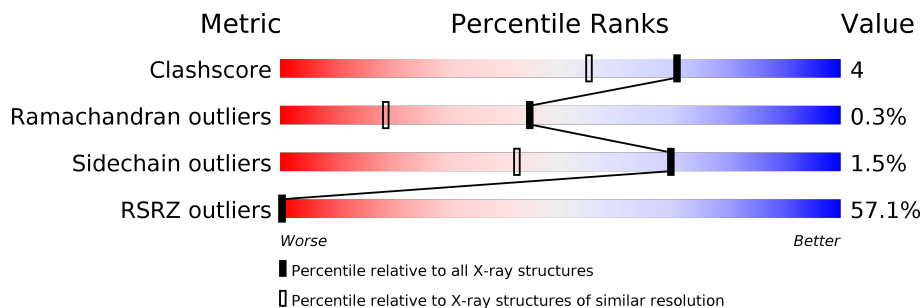
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 1.50 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))
Clashscore	112137	2503 (1.50-1.50)
Ramachandran outliers	110173	2445 (1.50-1.50)
Sidechain outliers	110143	2443 (1.50-1.50)
RSRZ outliers	101464	2305 (1.50-1.50)

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	377	

## 2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 2885 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.

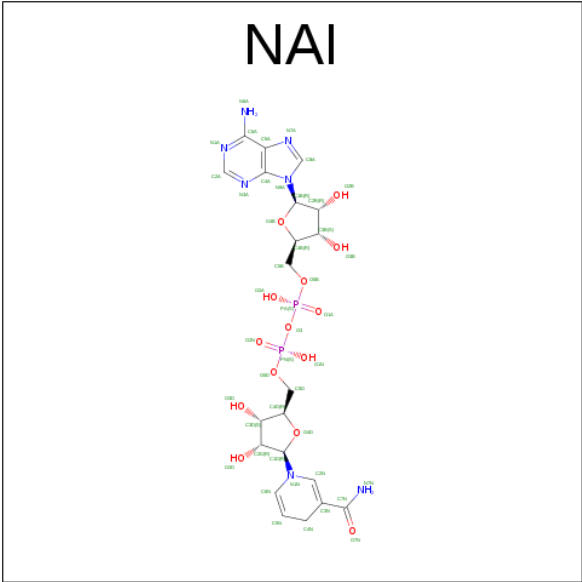
- Molecule 1 is a protein called Putative nucleotide sugar epimerase/ dehydratase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	336	Total	C	N	O	S	0	6	0
			2593	1650	447	491	5			

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-19	MET	-	EXPRESSION TAG	UNP O87989
A	-18	GLY	-	EXPRESSION TAG	UNP O87989
A	-17	SER	-	EXPRESSION TAG	UNP O87989
A	-16	SER	-	EXPRESSION TAG	UNP O87989
A	-15	HIS	-	EXPRESSION TAG	UNP O87989
A	-14	HIS	-	EXPRESSION TAG	UNP O87989
A	-13	HIS	-	EXPRESSION TAG	UNP O87989
A	-12	HIS	-	EXPRESSION TAG	UNP O87989
A	-11	HIS	-	EXPRESSION TAG	UNP O87989
A	-10	HIS	-	EXPRESSION TAG	UNP O87989
A	-9	SER	-	EXPRESSION TAG	UNP O87989
A	-8	SER	-	EXPRESSION TAG	UNP O87989
A	-7	GLY	-	EXPRESSION TAG	UNP O87989
A	-6	LEU	-	EXPRESSION TAG	UNP O87989
A	-5	VAL	-	EXPRESSION TAG	UNP O87989
A	-4	PRO	-	EXPRESSION TAG	UNP O87989
A	-3	ARG	-	EXPRESSION TAG	UNP O87989
A	-2	GLY	-	EXPRESSION TAG	UNP O87989
A	-1	SER	-	EXPRESSION TAG	UNP O87989
A	0	HIS	-	EXPRESSION TAG	UNP O87989

- Molecule 2 is 1,4-DIHYDRONICOTINAMIDE ADENINE DINUCLEOTIDE (three-letter code: NAI) (formula: C<sub>21</sub>H<sub>29</sub>N<sub>7</sub>O<sub>14</sub>P<sub>2</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
2	A	1	44	21	7	14	2	0	0

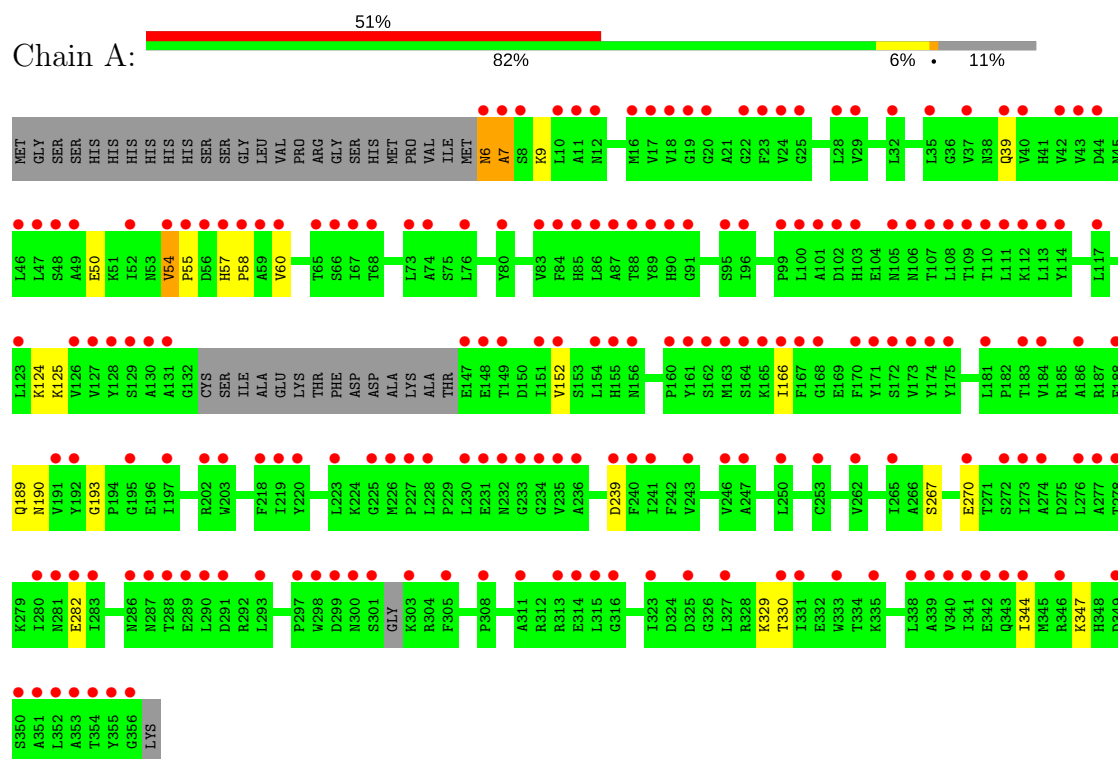
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	248	Total	O	0	0
			248	248		

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

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $\text{RSRZ} > 2$ ). 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: Putative nucleotide sugar epimerase/ dehydratase



## 4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	83.19Å 77.88Å 59.41Å 90.00° 108.19° 90.00°	Depositor
Resolution (Å)	38.52 – 1.50 38.51 – 1.50	Depositor EDS
% Data completeness (in resolution range)	99.2 (38.52-1.50) 99.2 (38.51-1.50)	Depositor EDS
$R_{merge}$	0.05	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.40 (at 1.50Å)	Xtriage
Refinement program	REFMAC 5.0	Depositor
R, $R_{free}$	0.192 , 0.226 0.185 , (Not available)	Depositor DCC
$R_{free}$ test set	No test flags present.	DCC
Wilson B-factor (Å <sup>2</sup> )	31.1	Xtriage
Anisotropy	0.071	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.30 , 34.8	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.51$ , $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.95	EDS
Total number of atoms	2885	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	44.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.25% 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

### 5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NAI

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	0.67	1/2666 (0.0%)	0.73	0/3625

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	270	GLU	CD-OE2	7.72	1.34	1.25

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	6	ASN	Peptide

### 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2593	0	2522	21	0
2	A	44	0	27	1	0
3	A	248	0	0	8	0
All	All	2885	0	2549	21	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 (21) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:39[B]:GLN:NE2	3:A:502:HOH:O	1.94	0.98
1:A:239[B]:ASP:OD1	3:A:600:HOH:O	1.81	0.98
1:A:239[A]:ASP:OD1	1:A:267:SER:OG	2.08	0.69
1:A:7:ALA:HB1	1:A:9:LYS:H	1.59	0.67
1:A:7:ALA:HB2	3:A:567:HOH:O	1.99	0.61
1:A:190:ASN:ND2	3:A:600:HOH:O	1.97	0.60
1:A:6:ASN:HA	3:A:413:HOH:O	2.02	0.58
1:A:6:ASN:N	3:A:466:HOH:O	2.38	0.56
1:A:6:ASN:O	1:A:7:ALA:CB	2.56	0.54
1:A:54:VAL:O	1:A:54:VAL:HG22	2.06	0.54
1:A:7:ALA:CB	1:A:9:LYS:H	2.23	0.52
1:A:189:GLN:HA	2:A:358:NAI:H42N	1.94	0.49
1:A:6:ASN:O	1:A:7:ALA:HB2	2.13	0.48
1:A:329:LYS:NZ	3:A:563:HOH:O	2.48	0.46
1:A:193:GLY:HA2	1:A:330:THR:OG1	2.17	0.44
1:A:55:PRO:HG2	1:A:60:VAL:HG21	2.01	0.42
1:A:344:ILE:O	1:A:347:LYS:HG2	2.20	0.41
1:A:57:HIS:ND1	1:A:58:PRO:HD2	2.35	0.41
1:A:50:GLU:HG3	1:A:344:ILE:HD13	2.03	0.41
1:A:6:ASN:CA	3:A:413:HOH:O	2.66	0.41
1:A:152[A]:VAL:HG11	1:A:166:ILE:HD13	2.04	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	336/377 (89%)	331 (98%)	4 (1%)	1 (0%)	44	19

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	7	ALA

### 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	269/315 (85%)	265 (98%)	4 (2%)	70	42

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	54	VAL
1	A	124	LYS
1	A	125	LYS
1	A	282	GLU

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

Mol	Chain	Res	Type
1	A	178	GLN

### 5.3.3 RNA ⓘ

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](#)

1 ligand is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
2	NAI	A	358	-	40,48,48	1.38	5 (12%)	41,73,73	1.40	6 (14%)

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
2	NAI	A	358	-	-	0/25/72/72	0/5/5/5

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	358	NAI	C4N-C5N	-2.83	1.42	1.49
2	A	358	NAI	PN-O1N	-2.01	1.45	1.55
2	A	358	NAI	O4B-C1B	2.63	1.44	1.41
2	A	358	NAI	C6N-C5N	3.55	1.39	1.33
2	A	358	NAI	C5A-C4A	3.72	1.48	1.40

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	358	NAI	C4A-C5A-N7A	-4.95	104.63	109.41
2	A	358	NAI	C4B-O4B-C1B	-3.10	106.47	109.77
2	A	358	NAI	C1B-N9A-C4A	-2.43	122.44	126.64
2	A	358	NAI	O4D-C1D-C2D	-2.41	101.30	106.64
2	A	358	NAI	N3A-C2A-N1A	-2.33	126.83	128.86
2	A	358	NAI	O1N-PN-O2N	2.22	123.77	112.28

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	358	NAI	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	336/377 (89%)	2.88	192 (57%) 0 0	23, 44, 63, 71	0

All (192) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	6	ASN	11.3
1	A	167	PHE	10.3
1	A	274	ALA	9.9
1	A	111	LEU	9.7
1	A	108	LEU	9.3
1	A	7	ALA	8.8
1	A	288	THR	8.5
1	A	171	TYR	8.4
1	A	8	SER	7.9
1	A	354	THR	7.7
1	A	113	LEU	7.5
1	A	86	LEU	7.4
1	A	227	PRO	7.2
1	A	339	ALA	6.9
1	A	107	THR	6.8
1	A	87	ALA	6.7
1	A	161	TYR	6.7
1	A	170	PHE	6.6
1	A	305	PHE	6.6
1	A	67	ILE	6.5
1	A	100	LEU	6.4
1	A	114	TYR	6.4
1	A	128	TYR	6.4
1	A	18	VAL	6.3
1	A	24	VAL	6.2
1	A	166	ILE	6.1
1	A	88	THR	6.0

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Mol	Chain	Res	Type	RSRZ
1	A	287[A]	ASN	6.0
1	A	110	THR	5.9
1	A	154	LEU	5.8
1	A	353	ALA	5.8
1	A	181	LEU	5.8
1	A	89	TYR	5.8
1	A	151	ILE	5.7
1	A	230	LEU	5.7
1	A	96	ILE	5.6
1	A	298	TRP	5.6
1	A	109	THR	5.6
1	A	84	PHE	5.5
1	A	54	VAL	5.5
1	A	352	LEU	5.5
1	A	126	VAL	5.3
1	A	83	VAL	5.2
1	A	56	ASP	5.2
1	A	23	PHE	5.2
1	A	43	VAL	5.0
1	A	127	VAL	5.0
1	A	191	VAL	5.0
1	A	32	LEU	4.9
1	A	163	MET	4.8
1	A	175	TYR	4.8
1	A	76	LEU	4.8
1	A	28	LEU	4.8
1	A	262	VAL	4.7
1	A	55	PRO	4.7
1	A	164	SER	4.6
1	A	290	LEU	4.6
1	A	241	ILE	4.6
1	A	246	VAL	4.6
1	A	37	VAL	4.5
1	A	106	ASN	4.5
1	A	40	VAL	4.5
1	A	276	LEU	4.5
1	A	42	VAL	4.4
1	A	344	ILE	4.4
1	A	346	ARG	4.4
1	A	188	PHE	4.3
1	A	47	LEU	4.3
1	A	291	ASP	4.3

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Mol	Chain	Res	Type	RSRZ
1	A	283	ILE	4.3
1	A	350	SER	4.2
1	A	165	LYS	4.2
1	A	148	GLU	4.1
1	A	231	GLU	4.1
1	A	103	HIS	4.1
1	A	351	ALA	4.1
1	A	184	VAL	4.1
1	A	331	ILE	4.0
1	A	355	TYR	4.0
1	A	160	PRO	4.0
1	A	149	THR	4.0
1	A	232	ASN	4.0
1	A	39[A]	GLN	4.0
1	A	99	PRO	3.9
1	A	327	LEU	3.9
1	A	243	VAL	3.9
1	A	85	HIS	3.9
1	A	341	ILE	3.8
1	A	105	ASN	3.8
1	A	301	SER	3.8
1	A	155	HIS	3.8
1	A	117	LEU	3.8
1	A	315	LEU	3.7
1	A	223	LEU	3.7
1	A	174	TYR	3.7
1	A	129	SER	3.6
1	A	156	ASN	3.6
1	A	280	ILE	3.6
1	A	130	ALA	3.5
1	A	253	CYS	3.5
1	A	73	LEU	3.5
1	A	192	TYR	3.5
1	A	112	LYS	3.5
1	A	147	GLU	3.5
1	A	250	LEU	3.5
1	A	225	GLY	3.5
1	A	220	TYR	3.4
1	A	162[A]	SER	3.4
1	A	123	LEU	3.4
1	A	59	ALA	3.4
1	A	101	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
1	A	343	GLN	3.4
1	A	297	PRO	3.4
1	A	219	ILE	3.3
1	A	152[A]	VAL	3.3
1	A	325	ASP	3.3
1	A	168	GLY	3.3
1	A	270	GLU	3.3
1	A	273	ILE	3.2
1	A	340	VAL	3.2
1	A	58	PRO	3.2
1	A	338	LEU	3.2
1	A	303	LYS	3.2
1	A	333	TRP	3.2
1	A	316	GLY	3.1
1	A	131	ALA	3.1
1	A	278	THR	3.1
1	A	60	VAL	3.1
1	A	57	HIS	3.0
1	A	277	ALA	3.0
1	A	29	VAL	2.9
1	A	25	GLY	2.9
1	A	234	GLY	2.9
1	A	203	TRP	2.9
1	A	240	PHE	2.8
1	A	80	TYR	2.8
1	A	90	HIS	2.8
1	A	286	ASN	2.8
1	A	313	ARG	2.8
1	A	311	ALA	2.8
1	A	226	MET	2.8
1	A	323	ILE	2.7
1	A	35	LEU	2.7
1	A	299	ASP	2.7
1	A	173	VAL	2.7
1	A	17	VAL	2.7
1	A	172	SER	2.7
1	A	20	GLY	2.7
1	A	48	SER	2.7
1	A	235	VAL	2.6
1	A	74	ALA	2.6
1	A	342	GLU	2.6
1	A	197	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	22	GLY	2.6
1	A	233	GLY	2.6
1	A	16	MET	2.6
1	A	195	GLY	2.5
1	A	102	ASP	2.5
1	A	19	GLY	2.5
1	A	12	ASN	2.5
1	A	65	THR	2.5
1	A	218	PHE	2.5
1	A	66	SER	2.4
1	A	46	LEU	2.4
1	A	228	LEU	2.4
1	A	183	THR	2.4
1	A	95	SER	2.4
1	A	356	GLY	2.4
1	A	281	ASN	2.4
1	A	202	ARG	2.3
1	A	68	THR	2.3
1	A	308	PRO	2.3
1	A	289	GLU	2.3
1	A	300	ASN	2.2
1	A	10	LEU	2.2
1	A	335	LYS	2.2
1	A	265	ILE	2.2
1	A	282	GLU	2.2
1	A	186	ALA	2.2
1	A	236	ALA	2.2
1	A	91	GLY	2.2
1	A	11	ALA	2.1
1	A	330	THR	2.1
1	A	239[A]	ASP	2.1
1	A	293	LEU	2.1
1	A	349	ASP	2.1
1	A	314	GLU	2.1
1	A	247	ALA	2.1
1	A	272	SER	2.0
1	A	44	ASP	2.0
1	A	52	ILE	2.0
1	A	49	ALA	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 carbohydrates in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
2	NAI	A	358	44/44	0.95	0.12	-2.02	23,26,31,33	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.