



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 7, 2026 – 02:15 AM UTC

PDB ID : 3H3L / pdb_00003h3l
Title : Crystal structure of PUTATIVE SUGAR HYDROLASE (YP_001304206.1)
from Parabacteroides distasonis ATCC 8503 at 1.59 Å resolution
Authors : Joint Center for Structural Genomics (JCSG)
Deposited on : 2009-04-16
Resolution : 1.59 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

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>.

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

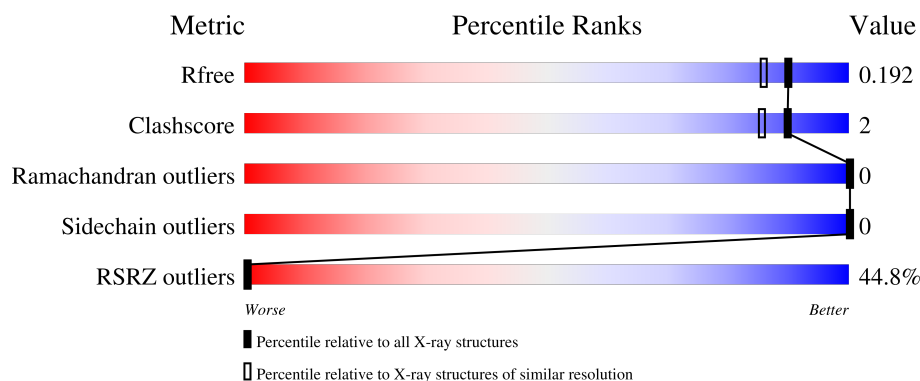
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.59 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}	180053	4673 (1.60-1.60)
Clashscore	190562	4931 (1.60-1.60)
Ramachandran outliers	187476	4831 (1.60-1.60)
Sidechain outliers	187428	4830 (1.60-1.60)
RSRZ outliers	180081	4672 (1.60-1.60)

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 ≥ 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	241	32% 93% • •
1	B	241	35% 93% • 5%
1	C	241	57% 88% 5% 7%

2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 6134 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.

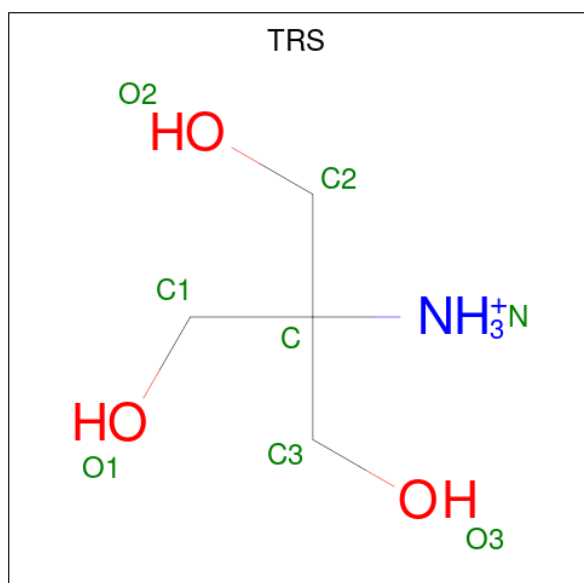
- Molecule 1 is a protein called PUTATIVE SUGAR HYDROLASE.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	232	Total	C	N	O	S	Se	0	11	0
			1899	1220	314	350	6	9			
1	B	229	Total	C	N	O	S	Se	0	13	0
			1885	1216	309	346	6	8			
1	C	223	Total	C	N	O	S	Se	0	13	0
			1838	1184	297	341	6	10			

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	0	GLY	-	expression tag	UNP A6LFX0
B	0	GLY	-	expression tag	UNP A6LFX0
C	0	GLY	-	expression tag	UNP A6LFX0

- Molecule 2 is 2-AMINO-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (CCD ID: TRS) (formula: C₄H₁₂NO₃).



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

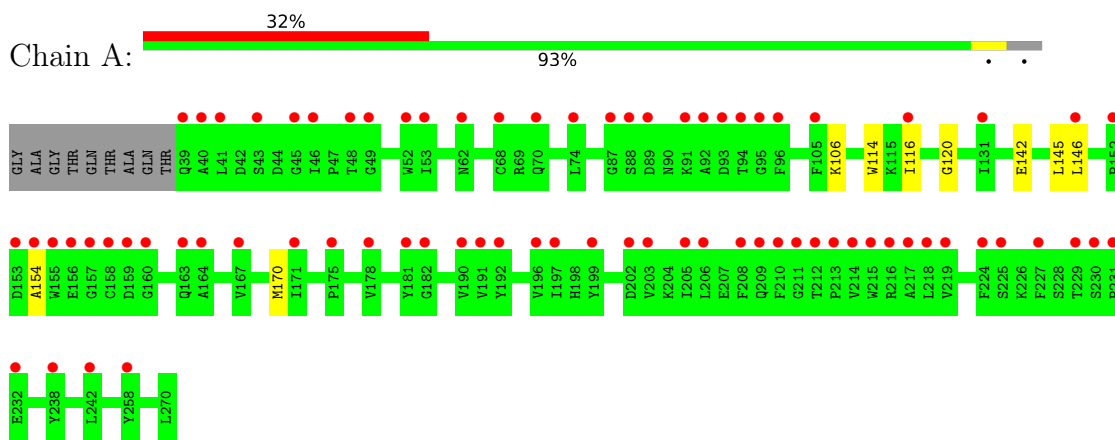
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	178	Total	O	0	0
			178	178		
3	B	169	Total	O	0	0
			169	169		
3	C	141	Total	O	0	0
			141	141		

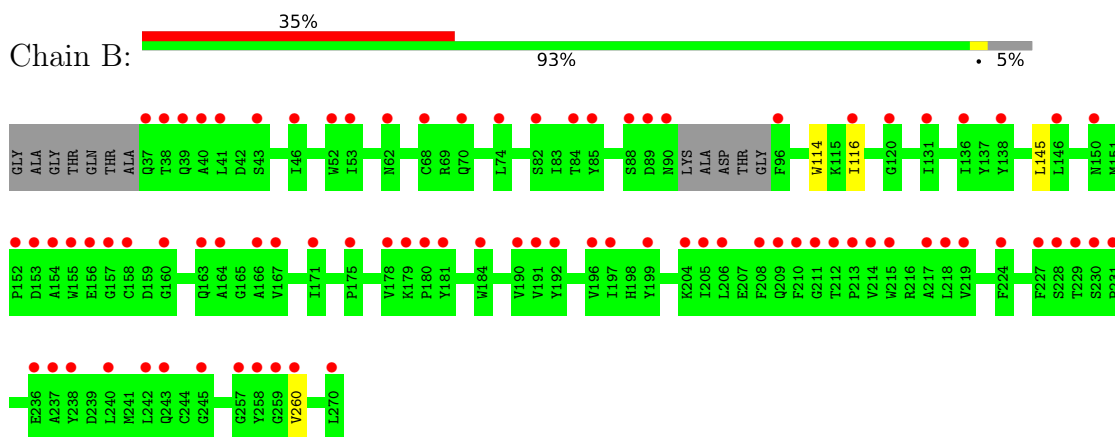
3 Residue-property plots [i](#)

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.

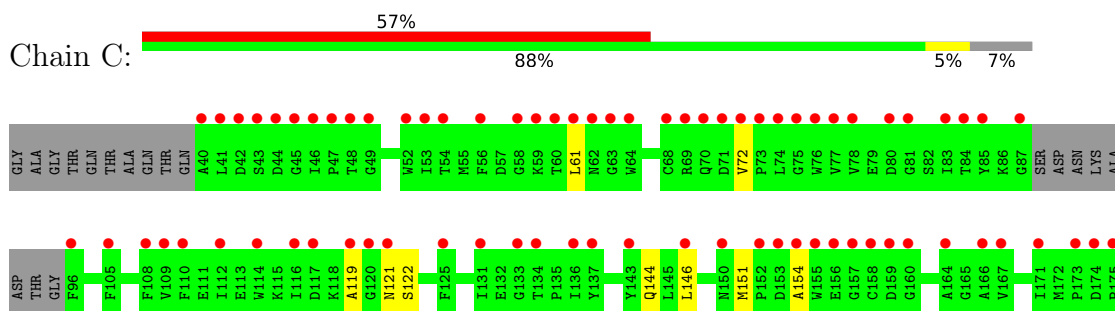
• Molecule 1: PUTATIVE SUGAR HYDROLASE

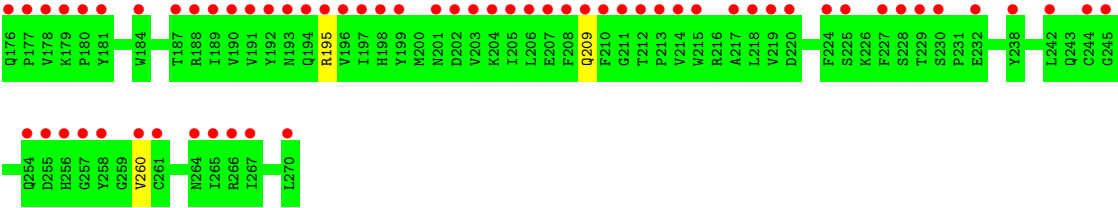


• Molecule 1: PUTATIVE SUGAR HYDROLASE



• Molecule 1: PUTATIVE SUGAR HYDROLASE





4 Data and refinement statistics

Property	Value	Source
Space group	P 43 21 2	Depositor
Cell constants a, b, c, α , β , γ	117.26Å 117.26Å 118.07Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.31 – 1.59 29.31 – 1.59	Depositor EDS
% Data completeness (in resolution range)	96.6 (29.31-1.59) 96.7 (29.31-1.59)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.42 (at 1.59Å)	Xtriage
Refinement program	REFMAC 5.2.0019, PHENIX	Depositor
R, R_{free}	0.170 , 0.185 0.181 , 0.192	Depositor DCC
R_{free} test set	5379 reflections (4.85%)	wwPDB-VP
Wilson B-factor (Å ²)	21.8	Xtriage
Anisotropy	0.102	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 43.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	0.019 for -h,l,k 0.013 for -l,-k,-h	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	6134	wwPDB-VP
Average B, all atoms (Å ²)	36.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.68% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.68	1/1974 (0.1%)	0.81	0/2659
1	B	0.68	0/1968	0.79	0/2650
1	C	0.70	0/1921	0.82	0/2589
All	All	0.69	1/5863 (0.0%)	0.80	0/7898

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	170	MSE	SE-CE	-5.64	1.78	1.95

There are no bond angle outliers.

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	1899	0	1819	5	0
1	B	1885	0	1817	2	0
1	C	1838	0	1755	13	0
2	A	8	0	12	0	0
2	B	8	0	12	0	0
2	C	8	0	12	0	0
3	A	178	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	169	0	0	0	0
3	C	141	0	0	1	0
All	All	6134	0	5427	20	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 2.

All (20) 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:121[A]:ASN:HB2	1:C:151[A]:MSE:HE3	1.54	0.89
1:C:195[A]:ARG:HG2	1:C:209[A]:GLN:OE1	1.74	0.87
1:C:122:SER:O	3:C:420:HOH:O	2.13	0.67
1:C:146:LEU:HD11	1:C:151[A]:MSE:HG2	1.84	0.60
1:C:146:LEU:CD1	1:C:151[A]:MSE:HG2	2.36	0.55
1:C:195[A]:ARG:CG	1:C:209[A]:GLN:OE1	2.52	0.53
1:C:144:GLN:NE2	1:C:146:LEU:HD13	2.25	0.52
1:C:146:LEU:HD11	1:C:151[A]:MSE:CG	2.39	0.52
1:C:121[A]:ASN:CB	1:C:151[A]:MSE:HE3	2.35	0.52
1:A:116:ILE:HD11	1:A:120:GLY:C	2.38	0.49
1:B:114:TRP:CE2	1:B:145:LEU:HD22	2.51	0.45
1:C:119:ALA:O	1:C:151[B]:MSE:SE	2.84	0.45
1:B:116:ILE:HG13	1:B:260:VAL:HG22	1.97	0.45
1:C:61:LEU:HD12	1:C:72:VAL:HG11	1.99	0.45
1:A:142:GLU:OE2	3:A:415:HOH:O	2.20	0.45
1:A:146:LEU:HD21	1:A:154:ALA:HB2	1.98	0.44
1:A:114:TRP:CE2	1:A:145:LEU:HD22	2.53	0.43
1:C:146:LEU:HD21	1:C:154:ALA:N	2.33	0.43
1:C:122:SER:HB2	1:C:260:VAL:HG21	2.01	0.42
1:A:106[B]:LYS:NZ	3:A:380:HOH:O	2.53	0.41

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	240/241 (100%)	229 (95%)	11 (5%)	0	100	100
1	B	238/241 (99%)	231 (97%)	7 (3%)	0	100	100
1	C	232/241 (96%)	226 (97%)	6 (3%)	0	100	100
All	All	710/723 (98%)	686 (97%)	24 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	200/197 (102%)	200 (100%)	0	100	100
1	B	200/197 (102%)	200 (100%)	0	100	100
1	C	196/197 (100%)	196 (100%)	0	100	100
All	All	596/591 (101%)	596 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	62	ASN
1	C	129	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

3 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	TRS	C	1	-	7,7,7	0.30	0	9,9,9	1.25	2 (22%)
2	TRS	A	2	-	7,7,7	0.29	0	9,9,9	1.00	1 (11%)
2	TRS	B	3	-	7,7,7	0.36	0	9,9,9	0.92	1 (11%)

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	TRS	C	1	-	-	3/9/9/9	-
2	TRS	A	2	-	-	1/9/9/9	-
2	TRS	B	3	-	-	0/9/9/9	-

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	1	TRS	O3-C3-C	2.45	117.70	110.88
2	A	2	TRS	C3-C-C1	-2.13	104.98	110.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	1	TRS	C3-C-N	2.07	113.44	108.17
2	B	3	TRS	C3-C-C1	-2.05	105.19	110.66

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	C	1	TRS	N-C-C1-O1
2	C	1	TRS	C3-C-C1-O1
2	C	1	TRS	C2-C-C1-O1
2	A	2	TRS	N-C-C3-O3

There are no ring outliers.

No monomer is involved in short contacts.

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, 95th 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 ²)	Q<0.9
1	A	225/241 (93%)	1.81	76 (33%) 1 1	18, 34, 48, 63	9 (4%)
1	B	222/241 (92%)	1.95	84 (37%) 1 0	21, 34, 47, 62	11 (4%)
1	C	216/241 (89%)	2.62	137 (63%) 0 0	20, 34, 44, 58	10 (4%)
All	All	663/723 (91%)	2.12	297 (44%) 0 0	18, 34, 47, 63	30 (4%)

All (297) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	154	ALA	10.5
1	B	155	TRP	9.1
1	A	154	ALA	8.5
1	C	155	TRP	7.7
1	C	154	ALA	7.4
1	A	155	TRP	6.9
1	A	152	PRO	6.4
1	C	53	ILE	5.5
1	B	152	PRO	5.5
1	C	40	ALA	5.5
1	B	37	GLN	5.4
1	C	215	TRP	5.3
1	C	214	VAL	5.3
1	A	93	ASP	5.3
1	C	203	VAL	5.3
1	C	78	VAL	5.0
1	C	213	PRO	4.8
1	C	45	GLY	4.8
1	C	46	ILE	4.8
1	C	116	ILE	4.8
1	C	190	VAL	4.7
1	C	41	LEU	4.7
1	C	217	ALA	4.7

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Mol	Chain	Res	Type	RSRZ
1	C	192	TYR	4.7
1	C	205	ILE	4.7
1	B	231	PRO	4.6
1	A	214	VAL	4.6
1	C	181	TYR	4.6
1	C	199	TYR	4.5
1	B	38	THR	4.5
1	C	212	THR	4.5
1	A	231	PRO	4.5
1	C	197	ILE	4.5
1	C	52	TRP	4.4
1	C	152	PRO	4.3
1	B	214	VAL	4.3
1	A	227	PHE	4.3
1	C	208	PHE	4.3
1	B	153	ASP	4.3
1	A	157	GLY	4.2
1	C	131	ILE	4.2
1	C	206	LEU	4.2
1	C	171	ILE	4.1
1	B	89	ASP	4.1
1	C	178	VAL	4.1
1	C	211	GLY	4.1
1	C	71	ASP	4.1
1	A	94	THR	4.1
1	C	204	LYS	4.1
1	A	92	ALA	4.1
1	B	88	SER	4.0
1	C	210	PHE	4.0
1	A	39[A]	GLN	4.0
1	B	96	PHE	3.9
1	B	230	SER	3.9
1	C	85	TYR	3.9
1	A	95	GLY	3.8
1	C	227	PHE	3.8
1	C	201	ASN	3.8
1	C	61	LEU	3.7
1	C	196	VAL	3.7
1	C	87	GLY	3.7
1	C	191	VAL	3.7
1	A	158	CYS	3.7
1	C	80	ASP	3.6

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Mol	Chain	Res	Type	RSRZ
1	C	62	ASN	3.6
1	A	74	LEU	3.6
1	C	270	LEU	3.6
1	A	153	ASP	3.6
1	C	43[A]	SER	3.6
1	C	84	THR	3.5
1	C	184	TRP	3.5
1	C	153	ASP	3.5
1	B	210	PHE	3.4
1	B	242	LEU	3.4
1	C	242	LEU	3.4
1	B	158	CYS	3.4
1	C	218	LEU	3.4
1	B	90	ASN	3.4
1	B	215	TRP	3.4
1	C	224	PHE	3.4
1	B	74	LEU	3.4
1	C	195[A]	ARG	3.3
1	B	227	PHE	3.3
1	C	76	TRP	3.3
1	B	218	LEU	3.3
1	C	68	CYS	3.3
1	A	215	TRP	3.3
1	C	175	PRO	3.3
1	C	202	ASP	3.2
1	B	157	GLY	3.2
1	B	160	GLY	3.2
1	A	212	THR	3.2
1	C	56	PHE	3.2
1	C	179	LYS	3.2
1	C	74	LEU	3.2
1	C	193	ASN	3.2
1	B	213	PRO	3.2
1	C	73	PRO	3.2
1	C	173	PRO	3.2
1	C	261	CYS	3.2
1	C	72	VAL	3.2
1	B	156	GLU	3.2
1	C	58	GLY	3.2
1	A	229	THR	3.2
1	C	117[A]	ASP	3.2
1	C	220	ASP	3.2

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Mol	Chain	Res	Type	RSRZ
1	A	46	ILE	3.2
1	B	219	VAL	3.2
1	C	219	VAL	3.2
1	A	156	GLU	3.1
1	B	212	THR	3.1
1	A	53	ILE	3.1
1	C	158	CYS	3.1
1	C	75	GLY	3.1
1	C	108	PHE	3.1
1	C	189	ILE	3.1
1	B	164	ALA	3.1
1	A	203	VAL	3.1
1	C	260	VAL	3.1
1	C	238	TYR	3.1
1	C	229	THR	3.1
1	A	40	ALA	3.1
1	B	150	ASN	3.0
1	C	166	ALA	3.0
1	C	60	THR	3.0
1	A	196	VAL	3.0
1	C	150	ASN	3.0
1	B	208	PHE	3.0
1	A	88	SER	3.0
1	B	171	ILE	3.0
1	A	213	PRO	3.0
1	A	206	LEU	3.0
1	B	270	LEU	3.0
1	A	41	LEU	2.9
1	C	44	ASP	2.9
1	C	146	LEU	2.9
1	A	171	ILE	2.9
1	B	205	ILE	2.9
1	C	69	ARG	2.9
1	C	121[A]	ASN	2.9
1	C	167	VAL	2.9
1	C	187	THR	2.9
1	A	45	GLY	2.9
1	C	157	GLY	2.9
1	A	91	LYS	2.8
1	B	181	TYR	2.8
1	C	258	TYR	2.8
1	B	260	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
1	B	68	CYS	2.8
1	A	208	PHE	2.8
1	C	110	PHE	2.8
1	A	205	ILE	2.8
1	B	53[A]	ILE	2.8
1	B	116	ILE	2.8
1	C	119	ALA	2.8
1	C	256	HIS	2.8
1	B	229	THR	2.8
1	C	96	PHE	2.8
1	A	167	VAL	2.7
1	A	191	VAL	2.7
1	C	120	GLY	2.7
1	C	209[A]	GLN	2.7
1	C	83	ILE	2.7
1	A	68	CYS	2.7
1	A	192	TYR	2.7
1	A	190	VAL	2.7
1	C	207	GLU	2.7
1	B	224	PHE	2.7
1	C	267	ILE	2.7
1	C	156	GLU	2.7
1	A	181	TYR	2.7
1	A	160	GLY	2.7
1	C	133	GLY	2.7
1	C	77	VAL	2.7
1	A	96	PHE	2.7
1	B	41	LEU	2.6
1	B	146	LEU	2.6
1	C	228	SER	2.6
1	A	52	TRP	2.6
1	B	184	TRP	2.6
1	C	188	ARG	2.6
1	A	49	GLY	2.6
1	A	116	ILE	2.6
1	A	210	PHE	2.6
1	A	89	ASP	2.6
1	B	39	GLN	2.6
1	B	206	LEU	2.6
1	B	240	LEU	2.6
1	C	48	THR	2.6
1	A	211	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
1	C	49	GLY	2.6
1	C	81	GLY	2.6
1	C	245	GLY	2.6
1	A	159	ASP	2.6
1	C	164	ALA	2.6
1	A	242	LEU	2.6
1	A	48	THR	2.5
1	B	85	TYR	2.5
1	B	192	TYR	2.5
1	C	125	PHE	2.5
1	C	198	HIS	2.5
1	C	266	ARG	2.5
1	C	63	GLY	2.5
1	C	177	PRO	2.5
1	A	217	ALA	2.5
1	C	143	TYR	2.5
1	B	120	GLY	2.5
1	C	47	PRO	2.5
1	B	167	VAL	2.5
1	B	191	VAL	2.5
1	A	70	GLN	2.5
1	A	164	ALA	2.4
1	B	237	ALA	2.4
1	C	244	CYS	2.4
1	A	163	GLN	2.4
1	C	174	ASP	2.4
1	C	70	GLN	2.4
1	C	160	GLY	2.4
1	B	197	ILE	2.4
1	A	230	SER	2.4
1	C	194	GLN	2.4
1	C	114	TRP	2.4
1	B	217	ALA	2.4
1	A	219	VAL	2.4
1	B	178	VAL	2.4
1	A	258	TYR	2.4
1	A	224	PHE	2.4
1	B	52	TRP	2.3
1	C	109	VAL	2.3
1	B	209	GLN	2.3
1	A	216	ARG	2.3
1	C	59	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	211	GLY	2.3
1	B	70	GLN	2.3
1	A	232	GLU	2.3
1	C	42	ASP	2.3
1	C	255	ASP	2.3
1	A	238	TYR	2.3
1	B	180	PRO	2.3
1	C	134	THR	2.3
1	C	64	TRP	2.3
1	B	179	LYS	2.3
1	C	112	ILE	2.3
1	B	138	TYR	2.3
1	C	225	SER	2.3
1	B	40	ALA	2.2
1	A	87	GLY	2.2
1	B	259	GLY	2.2
1	B	196	VAL	2.2
1	A	146	LEU	2.2
1	B	199	TYR	2.2
1	B	238	TYR	2.2
1	B	258	TYR	2.2
1	C	159	ASP	2.2
1	B	43[A]	SER	2.2
1	A	199	TYR	2.2
1	C	105	PHE	2.2
1	A	178	VAL	2.2
1	B	236	GLU	2.2
1	A	218	LEU	2.1
1	B	131	ILE	2.1
1	B	136	ILE	2.1
1	C	265	ILE	2.1
1	A	225	SER	2.1
1	B	204	LYS	2.1
1	A	175	PRO	2.1
1	A	209[A]	GLN	2.1
1	B	163[A]	GLN	2.1
1	B	228	SER	2.1
1	C	257	GLY	2.1
1	A	62	ASN	2.1
1	C	176	GLN	2.1
1	B	257	GLY	2.1
1	C	180	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	166	ALA	2.1
1	C	54	THR	2.1
1	A	131	ILE	2.1
1	B	46	ILE	2.1
1	C	136	ILE	2.1
1	C	254	GLN	2.1
1	C	230	SER	2.1
1	A	182	GLY	2.1
1	A	202	ASP	2.1
1	B	175	PRO	2.1
1	A	105	PHE	2.0
1	B	190	VAL	2.0
1	B	243	GLN	2.0
1	A	197	ILE	2.0
1	A	43[A]	SER	2.0
1	B	82	SER	2.0
1	C	264	ASN	2.0
1	B	245	GLY	2.0
1	B	84	THR	2.0
1	C	232[A]	GLU	2.0
1	B	62	ASN	2.0
1	C	137	TYR	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 oligosaccharides 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. The B-factors column lists the minimum, median, 95th 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	B-factors(Å ²)	Q<0.9
2	TRS	C	1	8/8	0.84	0.20	30,39,41,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	TRS	A	2	8/8	0.89	0.17	25,29,32,33	0
2	TRS	B	3	8/8	0.92	0.15	26,32,34,35	0

6.5 Other polymers [i](#)

There are no such residues in this entry.