



Full wwPDB X-ray Structure Validation Report ⓘ

Dec 22, 2025 – 06:57 PM JST

PDB ID : 9LZC / pdb_00009lzc
Title : Reductive-half reaction intermediate of copper amine oxidase from *Arthrobacter globiformis* captured with long-a-axis diffraction data by mix-and-inject serial crystallography at 50-ms time delay
Authors : Murakawa, T.; Okajima, T.
Deposited on : 2025-02-21
Resolution : 1.86 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 : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4 : 9.0.011 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.47

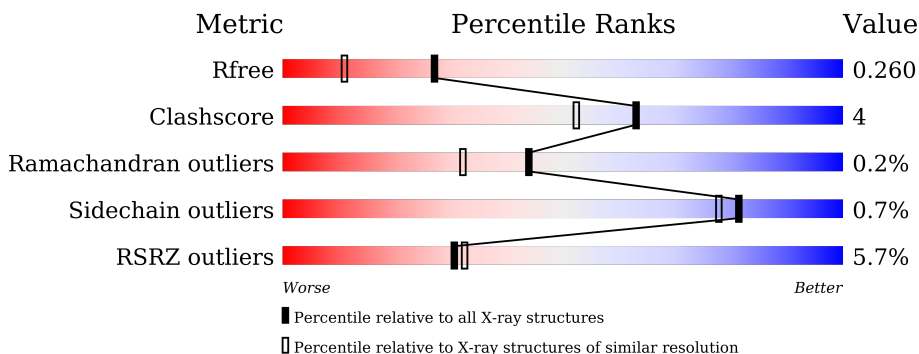
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.86 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}	164625	3097 (1.86-1.86)
Clashscore	180529	3359 (1.86-1.86)
Ramachandran outliers	177936	3335 (1.86-1.86)
Sidechain outliers	177891	3335 (1.86-1.86)
RSRZ outliers	164620	3097 (1.86-1.86)

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	620	3% 91% 9%
1	B	620	8% 91% 9%

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 10729 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 Phenylethylamine oxidase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	620	Total	C	N	O	S	0	3	0
			4883	3084	858	931	10			
1	B	620	Total	C	N	O	S	0	4	0
			4893	3092	861	931	9			

- Molecule 2 is COPPER (II) ION (CCD ID: CU) (formula: Cu).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	1	Total	Cu	0	0
			1	1		
2	B	1	Total	Cu	0	0
			1	1		

- Molecule 3 is SODIUM ION (CCD ID: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total	Na	0	0
			1	1		
3	B	1	Total	Na	0	0
			1	1		

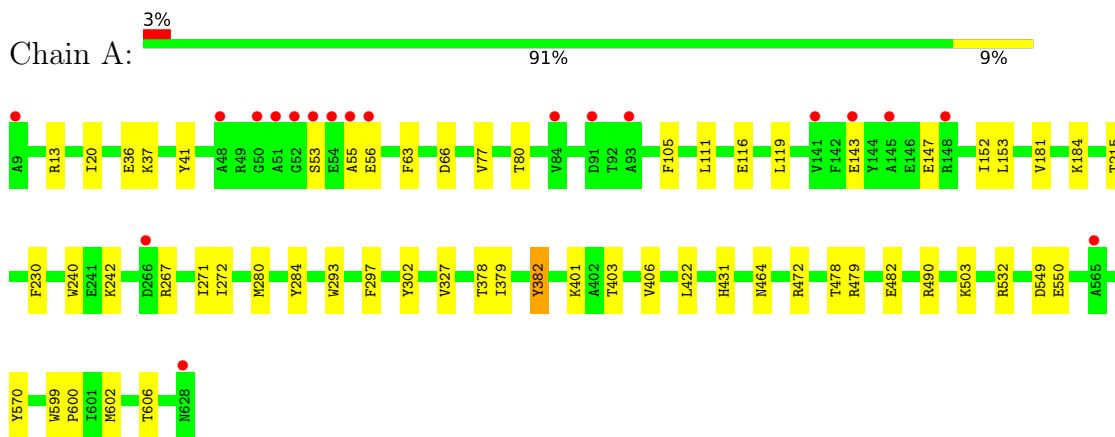
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	490	Total	O	0	1
			490	490		
4	B	459	Total	O	0	1
			459	459		

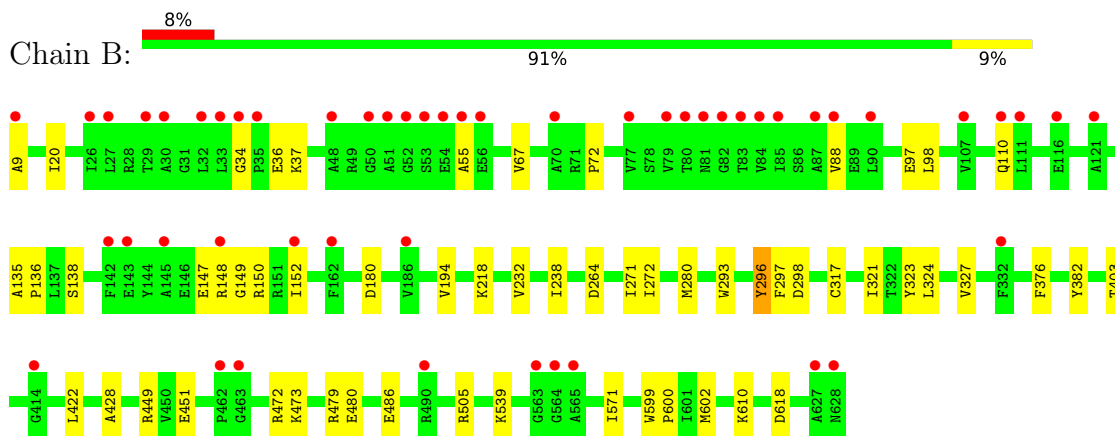
3 Residue-property plots

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: Phenylethylamine oxidase



• Molecule 1: Phenylethylamine oxidase



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	193.66Å 64.90Å 158.61Å 90.00° 116.97° 90.00°	Depositor
Resolution (Å)	29.92 – 1.86 29.92 – 1.86	Depositor EDS
% Data completeness (in resolution range)	99.9 (29.92-1.86) 99.9 (29.92-1.86)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.30 (at 1.87Å)	Xtriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.223 , 0.260 0.223 , 0.260	Depositor DCC
R_{free} test set	17969 reflections (4.83%)	wwPDB-VP
Wilson B-factor (Å ²)	24.1	Xtriage
Anisotropy	0.669	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 46.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	10729	wwPDB-VP
Average B, all atoms (Å ²)	31.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 81.32 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 3.6434e-07. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NA, CU, TPQ

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	0.34	0/4999	0.57	0/6806
1	B	0.32	0/5012	0.54	0/6823
All	All	0.33	0/10011	0.56	0/13629

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4883	0	4710	40	0
1	B	4893	0	4730	35	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
4	A	490	0	0	9	0
4	B	459	0	0	12	0
All	All	10729	0	9440	74	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 (74) 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:181:VAL:O	1:A:184:LYS:NZ	2.11	0.83
1:A:147:GLU:HG2	1:A:152:ILE:HD12	1.64	0.80
1:B:479:ARG:NH2	4:B:1112:HOH:O	2.25	0.69
1:A:111:LEU:HD21	1:A:184:LYS:HB3	1.76	0.67
1:B:298:ASP:OD1	4:B:1101:HOH:O	2.13	0.67
1:B:599:TRP:CD2	1:B:600:PRO:HA	2.31	0.66
1:A:215:THR:OG1	4:A:1101:HOH:O	2.14	0.65
1:B:97:GLU:OE2	4:B:1102:HOH:O	2.15	0.65
1:A:479:ARG:NH1	4:A:1115:HOH:O	2.30	0.64
1:A:116:GLU:H	1:A:116:GLU:CD	2.07	0.63
1:A:271:ILE:HG22	1:A:272:ILE:HG13	1.82	0.61
1:A:478:THR:N	1:A:482:GLU:OE2	2.23	0.61
1:A:599:TRP:CD2	1:A:600:PRO:HA	2.36	0.61
1:A:267:ARG:NH2	4:A:1105:HOH:O	2.23	0.60
1:B:610:LYS:NZ	4:B:1125:HOH:O	2.34	0.59
1:A:242:LYS:NZ	4:A:1121:HOH:O	2.32	0.58
1:B:150:ARG:HD2	1:B:180:ASP:OD2	2.04	0.57
1:A:549:ASP:OD2	4:A:1102:HOH:O	2.17	0.57
1:A:80:THR:HG22	1:B:148:ARG:HD3	1.88	0.56
1:B:480:GLU:HB3	1:B:571[A]:ILE:HD13	1.88	0.56
1:A:37:LYS:NZ	1:A:66:ASP:OD2	2.34	0.55
1:B:610:LYS:NZ	4:B:1114:HOH:O	2.27	0.54
1:A:401:LYS:HG2	1:A:606:THR:HG22	1.90	0.54
1:B:218:LYS:NZ	4:B:1138:HOH:O	2.40	0.53
1:B:34:GLY:H	1:B:37:LYS:HG3	1.74	0.52
1:B:9:ALA:N	4:B:1141:HOH:O	2.42	0.52
1:B:271:ILE:HG22	1:B:272:ILE:HG13	1.90	0.52
1:B:422:LEU:HD11	1:B:428:ALA:HB2	1.92	0.52
1:B:403:THR:HA	1:B:602:MET:HG3	1.92	0.52
1:A:280:MET:O	1:A:297:PHE:HA	2.10	0.52
1:B:505:ARG:HD3	1:B:618:ASP:HB3	1.92	0.52
1:B:149:GLY:O	4:B:1105:HOH:O	2.19	0.49
1:A:422:LEU:HD13	1:A:599:TRP:HB2	1.94	0.48
1:A:532:ARG:HG3	4:A:1353:HOH:O	2.13	0.48
1:B:451:GLU:HG3	4:B:1128:HOH:O	2.13	0.48
1:B:147:GLU:HG2	1:B:152:ILE:CD1	2.44	0.47
1:A:479:ARG:O	1:A:482:GLU:HG2	2.15	0.47
1:B:138:SER:OG	1:B:296:TYR:HB3	2.14	0.47
1:B:280:MET:O	1:B:297:PHE:HA	2.16	0.46
1:B:36:GLU:O	1:B:67:VAL:HG22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:323:TYR:O	1:B:324:LEU:HD23	2.16	0.46
1:B:264:ASP:OD1	4:B:1106:HOH:O	2.21	0.45
1:A:550:GLU:HG2	1:A:570:TYR:CE1	2.51	0.45
1:B:473:LYS:NZ	4:B:1160:HOH:O	2.49	0.45
1:A:490:ARG:NH1	4:A:1151:HOH:O	2.48	0.45
1:A:105:PHE:HZ	1:A:302:TYR:CD1	2.36	0.44
1:A:503:LYS:NZ	4:A:1119:HOH:O	2.40	0.44
1:B:449[B]:ARG:NH2	4:B:1120:HOH:O	2.51	0.44
1:A:20:ILE:HD12	1:A:327:VAL:HG12	1.99	0.44
1:B:20:ILE:HD12	1:B:327:VAL:HG12	2.00	0.44
1:A:379:ILE:O	1:A:382:TPQ:H6	2.18	0.44
1:B:317:CYS:HB3	1:B:321:ILE:HG12	2.00	0.43
1:A:36:GLU:OE1	1:A:36:GLU:N	2.44	0.43
1:A:36:GLU:H	1:A:36:GLU:CD	2.27	0.43
1:A:153:LEU:HD12	1:A:181:VAL:HG11	2.01	0.43
1:A:378:THR:O	1:A:379:ILE:HD13	2.19	0.43
1:B:110:GLN:HE21	1:B:110:GLN:HB2	1.58	0.43
1:A:293:TRP:CD1	1:A:293:TRP:H	2.37	0.42
1:B:599:TRP:CE3	1:B:600:PRO:HA	2.53	0.42
1:A:406:VAL:HG21	1:A:422:LEU:HD11	2.01	0.42
1:B:293:TRP:CD1	1:B:293:TRP:H	2.36	0.42
1:A:403:THR:HA	1:A:602:MET:HG3	2.02	0.42
1:B:232:VAL:HG22	1:B:238:ILE:HD13	2.02	0.41
1:A:284:TYR:OH	1:A:382:TPQ:O4	2.36	0.41
1:A:284:TYR:CD2	1:A:431:HIS:HB3	2.56	0.41
1:A:143:GLU:H	1:A:143:GLU:CD	2.29	0.41
1:A:119:LEU:HD23	1:A:119:LEU:HA	1.93	0.41
1:B:486:GLU:OE2	1:B:539:LYS:NZ	2.52	0.41
1:A:53:SER:O	4:A:1103:HOH:O	2.22	0.40
1:B:135:ALA:HA	1:B:136:PRO:HD3	1.93	0.40
1:A:41:TYR:HB3	1:A:63:PHE:CD2	2.56	0.40
1:A:13:ARG:HH12	1:A:56:GLU:CD	2.28	0.40
1:A:230:PHE:HB3	1:A:240:TRP:HB2	2.03	0.40
1:B:72:PRO:HB2	1:B:98:LEU:HD11	2.03	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	620/620 (100%)	596 (96%)	22 (4%)	2 (0%)	37	25
1	B	621/620 (100%)	592 (95%)	28 (4%)	1 (0%)	44	32
All	All	1241/1240 (100%)	1188 (96%)	50 (4%)	3 (0%)	44	32

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	464	ASN
1	A	55	ALA
1	B	55	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	516/513 (101%)	513 (99%)	3 (1%)	84	81
1	B	517/513 (101%)	511 (99%)	6 (1%)	67	59
All	All	1033/1026 (101%)	1024 (99%)	9 (1%)	81	70

All (9) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	77	VAL
1	A	472[A]	ARG
1	A	472[B]	ARG

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Mol	Chain	Res	Type
1	B	88	VAL
1	B	194	VAL
1	B	296	TYR
1	B	376	PHE
1	B	472[A]	ARG
1	B	472[B]	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	73	GLN
1	A	110	GLN
1	A	418	ASN
1	A	458	GLN
1	A	573	GLN
1	B	110	GLN
1	B	458	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

2 non-standard protein/DNA/RNA residues 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	$\# Z > 2$
1	TPQ	A	382	1	13,14,15	0.87	0	15,19,21	1.75	2 (13%)
1	TPQ	B	382	1	13,14,15	0.72	0	15,19,21	1.85	2 (13%)

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
1	TPQ	A	382	1	-	1/5/22/24	0/1/1/1
1	TPQ	B	382	1	-	1/5/22/24	0/1/1/1

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	382	TPQ	C6-C1-C2	5.57	122.92	118.64
1	A	382	TPQ	C6-C1-C2	5.21	122.64	118.64
1	A	382	TPQ	CB-CA-C	-3.97	104.03	111.47
1	B	382	TPQ	CB-CA-C	-2.67	106.46	111.47

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	382	TPQ	N-CA-CB-C1
1	B	382	TPQ	N-CA-CB-C1

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	A	382	TPQ	2	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

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	619/620 (99%)	0.26	19 (3%) 51 54	15, 28, 44, 113	3 (0%)
1	B	619/620 (99%)	0.43	51 (8%) 19 20	15, 30, 52, 144	4 (0%)
All	All	1238/1240 (99%)	0.34	70 (5%) 30 32	15, 29, 48, 144	7 (0%)

All (70) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	51	ALA	5.4
1	A	51	ALA	4.7
1	B	53	SER	4.4
1	A	56	GLU	4.3
1	B	50	GLY	4.3
1	B	55	ALA	4.0
1	B	54	GLU	3.8
1	A	53	SER	3.7
1	A	52	GLY	3.7
1	A	565	ALA	3.7
1	B	35	PRO	3.6
1	B	52	GLY	3.6
1	B	564	GLY	3.5
1	B	565	ALA	3.5
1	B	9	ALA	3.4
1	A	9	ALA	3.4
1	A	55	ALA	3.4
1	A	628	ASN	3.0
1	A	84	VAL	3.0
1	B	84	VAL	3.0
1	B	82	GLY	3.0
1	B	33	LEU	2.9
1	B	148	ARG	2.9
1	A	145	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
1	B	29	THR	2.9
1	A	50	GLY	2.8
1	B	414	GLY	2.8
1	B	88	VAL	2.8
1	A	148	ARG	2.8
1	B	30	ALA	2.7
1	A	54	GLU	2.7
1	B	463	GLY	2.7
1	B	70	ALA	2.6
1	B	145	ALA	2.6
1	B	116	GLU	2.6
1	B	628	ASN	2.5
1	B	56	GLU	2.5
1	B	80	THR	2.5
1	B	111	LEU	2.4
1	B	79	VAL	2.4
1	B	462	PRO	2.4
1	B	110	GLN	2.4
1	B	152	ILE	2.4
1	B	121	ALA	2.4
1	B	32	LEU	2.4
1	B	81	ASN	2.4
1	B	142	PHE	2.3
1	A	141	VAL	2.3
1	A	93	ALA	2.3
1	B	627	ALA	2.3
1	A	91	ASP	2.2
1	B	27	LEU	2.2
1	B	34	GLY	2.2
1	A	266	ASP	2.2
1	B	186	VAL	2.2
1	B	563	GLY	2.2
1	B	85	ILE	2.2
1	B	143	GLU	2.1
1	B	490	ARG	2.1
1	B	26	ILE	2.1
1	A	143	GLU	2.1
1	A	48	ALA	2.1
1	B	83	THR	2.1
1	B	90	LEU	2.1
1	B	107	VAL	2.0
1	B	87	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
1	B	162	PHE	2.0
1	B	48	ALA	2.0
1	B	77	VAL	2.0
1	B	332	PHE	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [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($\text{\AA}^2$)	Q<0.9
1	TPQ	A	382	14/15	0.96	0.07	17,24,26,32	0
1	TPQ	B	382	14/15	0.96	0.06	19,23,26,28	0

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($\text{\AA}^2$)	Q<0.9
3	NA	B	1002	1/1	0.97	0.08	20,20,20,20	0
2	CU	B	1001	1/1	0.98	0.03	19,19,19,19	0
2	CU	A	1001	1/1	0.98	0.03	19,19,19,19	0
3	NA	A	1002	1/1	0.99	0.04	19,19,19,19	0

6.5 Other polymers [i](#)

There are no such residues in this entry.