

# Full wwPDB X-ray Structure Validation Report (i)

#### Apr 14, 2022 – 04:09 am BST

PDB ID : 6ZFD

> Title : 14-3-3 zeta bound to the phosphorylated 18E6 C-terminus

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2020-06-17 Deposited on

1.90 Å(reported) Resolution

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 (i) symbol.

The following versions of software and data (see references (1)) were used in the production of this report:

MolProbity 4.02b-467

> 1.8.4, CSD as541be (2020) Mogul

Xtriage (Phenix) 1.13

EDS 2.27

20191225.v01 (using entries in the PDB archive December 25th 2019) Percentile statistics

> Refmac 5.8.0267

CCP4 7.1.010 (Gargrove)

Ideal geometry (proteins) Engh & Huber (2001) Ideal geometry (DNA, RNA) Parkinson et al. (1996)

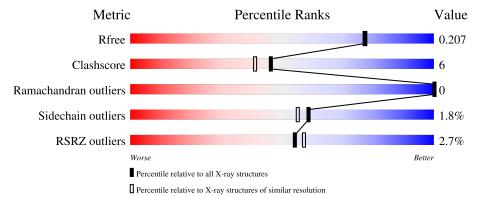
Validation Pipeline (wwPDB-VP)

## 1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure: X- $RAY\ DIFFRACTION$ 

The reported resolution of this entry is 1.90 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	Similar resolution
Metric	$(\#  ext{Entries})$	$(\#  ext{Entries},  ext{ resolution range}( ext{Å}))$
$R_{free}$	130704	6207 (1.90-1.90)
Clashscore	141614	6847 (1.90-1.90)
Ramachandran outliers	138981	6760 (1.90-1.90)
Sidechain outliers	138945	6760 (1.90-1.90)
RSRZ outliers	127900	6082 (1.90-1.90)

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 <=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	243	88%	10%	-			
1	В	243	87%	11%				



# 2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 4467 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 14-3-3 protein zeta/delta, Protein E6.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace		
1	A	241	Total 2039	C 1257	N 357	O 414	P 1	S 10	0	17	0
1	В	240	Total 1994		N 345	O 404	P 1	S 10	0	12	0

There are 28 discrepancies between the modelled and reference sequences:

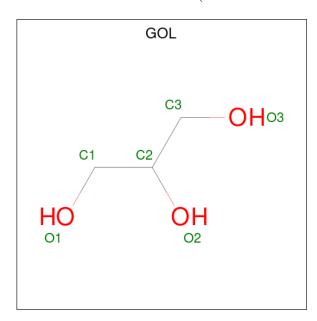
Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	GLY	-	expression tag	UNP P63104
A	-1	PRO	-	expression tag	UNP P63104
A	0	HIS	-	expression tag	UNP P63104
A	58	ALA	SER	conflict	UNP P63104
A	73	ALA	GLU	conflict	UNP P63104
A	74	ALA	LYS	conflict	UNP P63104
A	75	ALA	LYS	conflict	UNP P63104
A	157	ALA	LYS	conflict	UNP P63104
A	158	ALA	LYS	conflict	UNP P63104
A	159	ALA	GLU	conflict	UNP P63104
A	230	GLY	-	linker	UNP P63104
A	231	GLY	-	linker	UNP P63104
A	232	GLY	-	linker	UNP P63104
A	233	GLY	-	linker	UNP P63104
В	-2	GLY	-	expression tag	UNP P63104
В	-1	PRO	-	expression tag	UNP P63104
В	0	HIS	-	expression tag	UNP P63104
В	58	ALA	SER	conflict	UNP P63104
В	73	ALA	GLU	conflict	UNP P63104
В	74	ALA	LYS	conflict	UNP P63104
В	75	ALA	LYS	conflict	UNP P63104
В	157	ALA	LYS	conflict	UNP P63104
В	158	ALA	LYS	conflict	UNP P63104
В	159	ALA	GLU	conflict	UNP P63104
В	230	GLY	_	linker	UNP P63104



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Chain	Residue	Modelled	Actual	Comment	Reference
В	231	GLY	-	linker	UNP P63104
В	232	GLY	-	linker	UNP P63104
В	233	GLY	-	linker	UNP P63104

• Molecule 2 is GLYCEROL (three-letter code: GOL) (formula:  $C_3H_8O_3$ ).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total C O 6 3 3	0	0
2	В	1	Total C O 6 3 3	0	0
2	В	1	Total C O 6 3 3	0	0
2	В	1	Total C O 6 3 3	0	0

• Molecule 3 is water.

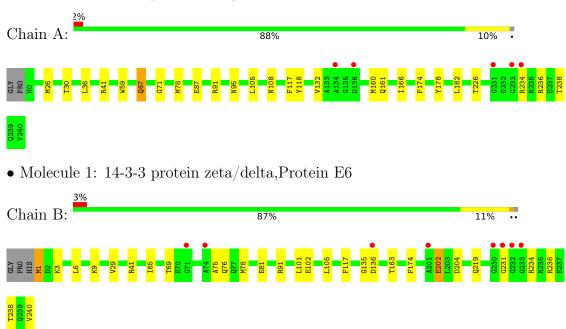
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	206	Total O 206 206	0	0
3	В	204	Total O 204 204	0	0



# 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: 14-3-3 protein zeta/delta,Protein E6





# 4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants	72.35Å 78.53Å 90.30Å	Depositor
a, b, c, $\alpha$ , $\beta$ , $\gamma$	90.00° 90.00° 90.00°	Depositor
Resolution (Å)	45.14 - 1.90	Depositor
resolution (A)	45.15 - 1.90	EDS
% Data completeness	100.0 (45.14-1.90)	Depositor
(in resolution range)	100.0 (45.15-1.90)	EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$< I/\sigma(I) > 1$	1.55 (at 1.89Å)	Xtriage
Refinement program	PHENIX 1.14_3260	Depositor
P.P.	0.176 , $0.207$	Depositor
$R, R_{free}$	0.176 , $0.207$	DCC
$R_{free}$ test set	2015 reflections (4.89%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	26.5	Xtriage
Anisotropy	0.540	Xtriage
Bulk solvent $k_{sol}(e/Å^3)$ , $B_{sol}(Å^2)$	(Not available), (Not available)	EDS
L-test for twinning <sup>2</sup>	$  <  L  > = 0.49, < L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.96	EDS
Total number of atoms	4467	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	33.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: The largest off-origin peak in the Patterson function is 6.93% of the height of the origin peak. No significant pseudotranslation is detected.

<sup>&</sup>lt;sup>2</sup>Theoretical values of <|L|>,  $<L^2>$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.



<sup>&</sup>lt;sup>1</sup>Intensities estimated from amplitudes.

## 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: GOL, TPO

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		
IVIOI		RMSZ	# Z  > 5	RMSZ	# Z  > 5	
1	A	0.38	0/2051	0.48	0/2754	
1	В	0.36	0/2006	0.48	0/2693	
All	All	0.37	0/4057	0.48	0/5447	

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 maintenain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2

There are no bond length outliers.

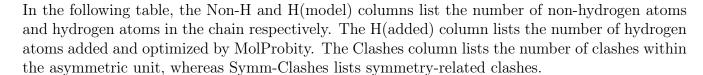
There are no bond angle outliers.

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	67[A]	GLN	Mainchain
1	A	67[B]	GLN	Mainchain

### 5.2 Too-close contacts (i)





Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2039	0	1991	16	0
1	В	1994	0	1959	36	0
2	A	6	0	8	1	0
2	В	18	0	24	2	0
3	A	206	0	0	4	0
3	В	204	0	0	12	0
All	All	4467	0	3982	51	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 (51) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic	Clash	
Atom-1	Atom-2	${\rm distance} \ ({\rm \AA})$	$-$ overlap $(\mathring{\mathbf{A}})$	
1:B:1:MET:CE	1:B:9:LYS:NZ	2.33	0.92	
1:B:1:MET:CE	1:B:9:LYS:HZ1	1.85	0.88	
1:B:1:MET:HE3	1:B:9:LYS:NZ	1.88	0.87	
1:B:1:MET:HE3	1:B:9:LYS:HZ1	1.44	0.77	
1:B:136:ASP:N	3:B:401:HOH:O	2.22	0.73	
1:A:41[B]:ARG:HD3	1:A:117:PHE:CD2	2.24	0.73	
1:A:30[B]:THR:HG22	1:A:36:LEU:HD11	1.72	0.71	
1:B:91:ARG:NH1	3:B:406:HOH:O	2.31	0.64	
1:B:41[B]:ARG:HD3	1:B:117:PHE:CE1	2.32	0.64	
1:A:41[B]:ARG:HD3	1:A:117:PHE:CG	2.33	0.62	
1:B:1:MET:CE	1:B:9:LYS:HZ3	2.11	0.60	
1:B:41[B]:ARG:HD3	1:B:117:PHE:CD1	2.36	0.60	
1:A:234[A]:ARG:NH2	3:A:405:HOH:O	2.36	0.59	
1:B:76:GLN:N	3:B:410:HOH:O	2.36	0.58	
1:B:1:MET:HE3	1:B:9:LYS:HZ3	1.66	0.57	
1:A:71:GLY:N	3:A:401:HOH:O	2.25	0.56	
1:B:219:GLN:NE2	3:B:415:HOH:O	2.40	0.55	
1:A:95:ASN:OD1	2:A:301:GOL:H12	2.08	0.53	
1:B:41[B]:ARG:HD3	1:B:117:PHE:CZ	2.44	0.53	
1:A:108[A]:ASN:ND2	3:A:407:HOH:O	2.42	0.52	
1:A:160:MET:HE1	1:A:166:ILE:HB	1.92	0.51	
1:B:102[A]:GLU:HG2	3:B:518:HOH:O	2.12	0.50	
1:A:161:GLN:NE2	3:A:408:HOH:O	2.44	0.49	
1:B:81:GLU:CB	2:B:302:GOL:H31	2.42	0.49	
1:A:59:TRP:CE2	1:A:132:VAL:HG12	2.48	0.49	
1:B:1:MET:HE3	1:B:6:LEU:HD23	1.94	0.49	
1:B:69:THR:HG21	3:B:598:HOH:O	2.13	0.48	
1:B:240:VAL:HG13	1:B:240:VAL:O	2.13	0.48	



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A		Interatomic	Clash
Atom-1	Atom-2	${\rm distance}(\mathring{\rm A})$	overlap (Å)
1:B:3:LYS:HG3	1:B:29:VAL:HG13	1.95	0.48
1:B:204:ASP:CB	3:B:403:HOH:O	2.62	0.48
1:B:1:MET:HE1	1:B:9:LYS:NZ	2.24	0.47
1:B:135:GLY:C	3:B:401:HOH:O	2.52	0.47
1:A:226:THR:OG1	1:A:234[A]:ARG:NE	2.47	0.47
1:B:231:GLY:HA2	1:B:234:ARG:NH2	2.28	0.47
1:B:78:MET:SD	1:B:78:MET:C	2.94	0.46
1:A:78:MET:SD	1:B:9:LYS:HG2	2.55	0.46
1:B:41[A]:ARG:HD3	3:B:427:HOH:O	2.16	0.45
1:A:26:MET:O	1:A:30[B]:THR:HG23	2.16	0.45
1:A:87:GLU:OE2	1:A:91:ARG:NH2	2.51	0.44
1:B:81:GLU:HB3	2:B:302:GOL:H31	1.98	0.44
1:B:163:THR:CG2	1:B:202:GLU:HG2	2.47	0.44
1:B:1:MET:HE3	1:B:6:LEU:CD2	2.48	0.43
1:B:204:ASP:CG	3:B:403:HOH:O	2.56	0.43
1:B:41[B]:ARG:HD3	1:B:117:PHE:CG	2.54	0.42
1:B:75:ALA:C	3:B:410:HOH:O	2.57	0.42
1:B:65:ILE:O	1:B:69:THR:HG23	2.19	0.42
1:A:105:LEU:HD22	1:A:118:TYR:CZ	2.55	0.41
1:B:41[A]:ARG:NH1	3:B:427:HOH:O	2.53	0.41
1:A:178:TYR:CD1	1:A:182:LEU:HD12	2.55	0.41
1:B:202:GLU:HG3	1:B:202:GLU:O	2.21	0.41
1:B:101:LEU:HA	1:B:105:LEU:HB2	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	$255/243\ (105\%)$	254 (100%)	1 (0%)	0	100	100
1	В	249/243 (102%)	247 (99%)	2 (1%)	0	100	100



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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles		
All	All	504/486 (104%)	501 (99%)	3 (1%)	0	100	100	

There are no Ramachandran outliers to report.

#### 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	Rotameric   Outliers		
1	A	215/200 (108%)	211 (98%)	4 (2%)	57 53	
1	В	210/200 (105%)	206 (98%)	4 (2%)	57 53	
All	All	425/400 (106%)	417 (98%)	8 (2%)	59 53	

All (8) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	67[A]	GLN
1	A	67[B]	GLN
1	A	174	PHE
1	A	236	ARG
1	В	1	MET
1	В	174	PHE
1	В	202	GLU
1	В	236	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

#### 5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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	Trino	Chain	Chain	Chain	Chain	Dag	Link	В	ond leng	$_{ m gths}$	В	ond ang	les
MIOI	Mol Type Chain	Res	LIIIK	Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2				
1	TPO	A	238	1	8,10,11	1.61	1 (12%)	10,14,16	1.32	1 (10%)			
1	TPO	В	238	1	8,10,11	1.00	0	10,14,16	1.41	2 (20%)			

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	TPO	A	238	1	-	2/9/11/13	-
1	TPO	В	238	1	-	3/9/11/13	-

#### All (1) bond length outliers are listed below:

$\mathbf{M}$	ol	Chain	$\operatorname{Res}$	Type	Atoms	$\mathbf{Z}$	$\operatorname{Observed}(\operatorname{\AA})$	$[Ideal(\AA)]$
1	_	A	238	TPO	P-O1P	3.13	1.60	1.50

#### All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$Observed(^o)$	$\operatorname{Ideal}({}^{o})$
1	A	238	TPO	P-OG1-CB	-3.14	113.73	123.21
1	В	238	TPO	P-OG1-CB	-2.86	114.57	123.21
1	В	238	TPO	CG2-CB-CA	-2.68	107.88	113.16

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	В	238	TPO	O-C-CA-CB
1	В	238	TPO	CB-OG1-P-O3P
1	A	238	TPO	CB-OG1-P-O3P
1	В	238	TPO	CB-OG1-P-O2P
1	A	238	TPO	O-C-CA-CB



There are no ring outliers.

No monomer is involved in short contacts.

### 5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

### 5.6 Ligand geometry (i)

4 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).

Mal	Mol Type Chain Re			es Link	Bond lengths			Bond angles			
MIOI	Type	Chain	Res	LIIIK	LILIK	Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
2	GOL	В	302	-	5,5,5	0.18	0	5,5,5	0.42	0	
2	GOL	В	303	-	5,5,5	0.90	0	5,5,5	1.02	0	
2	GOL	A	301	-	5,5,5	0.10	0	5,5,5	0.52	0	
2	GOL	В	301	-	5,5,5	0.90	0	5,5,5	0.95	0	

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	GOL	В	302	-	-	3/4/4/4	-
2	GOL	В	303	-	-	4/4/4/4	-
2	GOL	A	301	-	=	0/4/4/4	-
2	GOL	В	301	-	-	2/4/4/4	_

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (9) torsion outliers are listed below:



Mol	Chain	Res	Type	Atoms
2	В	301	GOL	O1-C1-C2-O2
2	В	301	GOL	O1-C1-C2-C3
2	В	302	GOL	O1-C1-C2-C3
2	В	303	GOL	O1-C1-C2-C3
2	В	303	GOL	O1-C1-C2-O2
2	В	302	GOL	O2-C2-C3-O3
2	В	303	GOL	O2-C2-C3-O3
2	В	303	GOL	C1-C2-C3-O3
2	В	302	GOL	O1-C1-C2-O2

There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	В	302	GOL	2	0
2	A	301	GOL	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 (i)

### 6.1 Protein, DNA and RNA chains (i)

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,  $95^{th}$  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 $>$	$\#\mathrm{RSRZ}{>}2$	$OWAB(A^2)$	Q<0.9
1	A	240/243 (98%)	-0.17	5 (2%) 63 66	20, 30, 51, 90	0
1	В	239/243 (98%)	-0.03	8 (3%) 46 49	17, 28, 66, 84	0
All	All	479/486 (98%)	-0.10	13 (2%) 54 57	17, 29, 59, 90	0

All (13) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	В	71	GLY	7.1
1	В	232	GLY	4.3
1	A	233	GLY	3.5
1	A	134	ALA	3.2
1	В	136	ASP	3.1
1	A	231	GLY	3.1
1	В	74	ALA	2.8
1	В	231	GLY	2.8
1	В	230	GLY	2.7
1	A	234[A]	ARG	2.6
1	A	136	ASP	2.3
1	В	233	GLY	2.0
1	В	201	ALA	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,  $95^{th}$  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	$\operatorname{Res}$	Atoms	RSCC	RSR	$\mathbf{B} ext{-}\mathbf{factors}(\mathbf{\mathring{A}}^2)$	Q<0.9
1	TPO	В	238	11/12	0.97	0.12	21,23,27,28	0



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Mol	Type	Chain	Res	Atoms	RSCC	RSR	$\mathbf{B} ext{-}\mathbf{factors}(\mathbf{\mathring{A}}^2)$	Q < 0.9
1	TPO	A	238	11/12	0.98	0.11	18,20,24,24	0

### 6.3 Carbohydrates (i)

There are no monosaccharides 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,  $95^{th}$  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	$\mathbf{B} ext{-}\mathbf{factors}(\mathbf{\mathring{A}}^2)$	Q<0.9
2	GOL	A	301	6/6	0.55	0.31	59,64,67,69	0
2	GOL	В	303	6/6	0.67	0.24	64,65,66,68	0
2	GOL	В	302	6/6	0.78	0.32	50,50,51,54	0
2	GOL	В	301	6/6	0.83	0.24	67,69,69,70	0

### 6.5 Other polymers (i)

There are no such residues in this entry.

