



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 05:20 AM GMT

PDB ID : 2QCC
Title : Crystal structure of the orotidine-5'-monophosphate decarboxylase domain of human UMP synthase, apo form
Authors : Wittmann, J.; Rudolph, M.
Deposited on : 2007-06-19
Resolution : 1.85 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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
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) : trunk26865

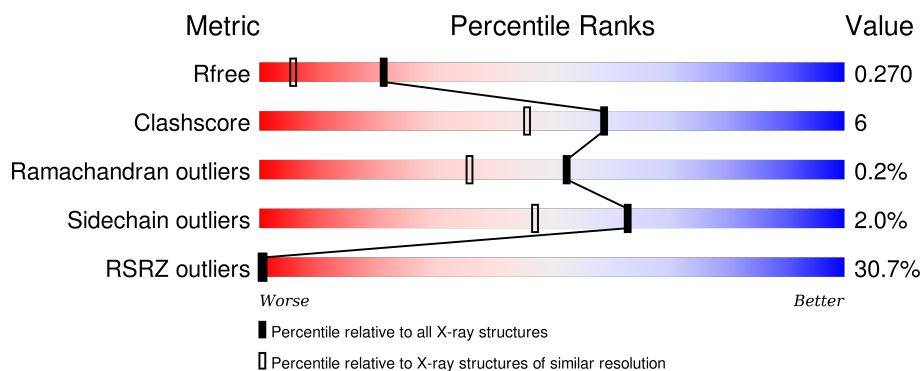
1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.85 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}	91344	1745 (1.86-1.86)
Clashscore	102246	1898 (1.86-1.86)
Ramachandran outliers	100387	1875 (1.86-1.86)
Sidechain outliers	100360	1875 (1.86-1.86)
RSRZ outliers	91569	1747 (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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 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	260	<div> <div>29%</div> <div>83%</div> <div>13%</div> <div>5%</div> </div>
1	B	260	<div> <div>30%</div> <div>85%</div> <div>12%</div> <div>.</div> </div>

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	GOL	B	482	-	-	-	X

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 4211 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 Orotidine 5'- phosphate decarboxylase (OMPdecase).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	248	Total	C	N	O	S	0	5	1
			1925	1228	331	354	12			
1	B	251	Total	C	N	O	S	0	9	2
			1959	1249	339	358	13			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	221	GLY	-	EXPRESSION TAG	UNP P11172
A	222	ALA	-	EXPRESSION TAG	UNP P11172
A	223	MET	-	EXPRESSION TAG	UNP P11172
B	221	GLY	-	EXPRESSION TAG	UNP P11172
B	222	ALA	-	EXPRESSION TAG	UNP P11172
B	223	MET	-	EXPRESSION TAG	UNP P11172

- Molecule 2 is SULFATE ION (three-letter code: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total O S 5 4 1	0	0
2	B	1	Total O S 5 4 1	0	0

- Molecule 3 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



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

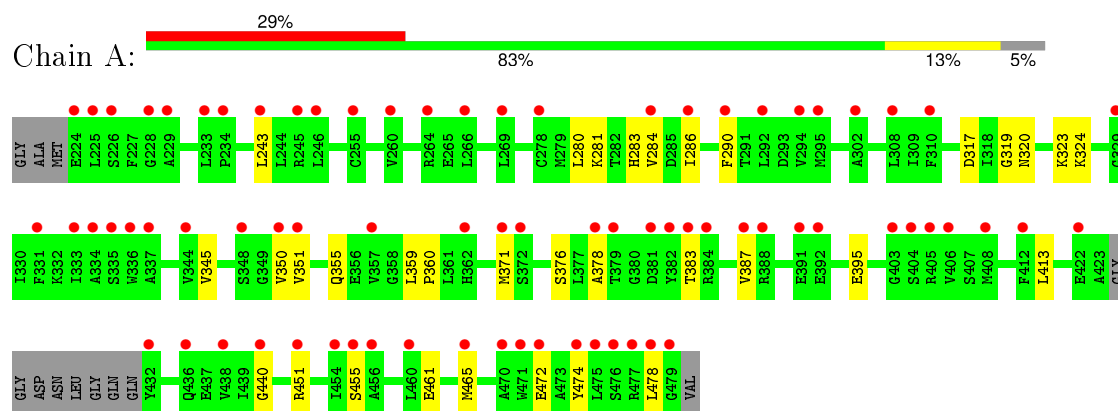
- Molecule 4 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	167	Total O 167 167	0	0
4	B	138	Total O 138 138	0	0

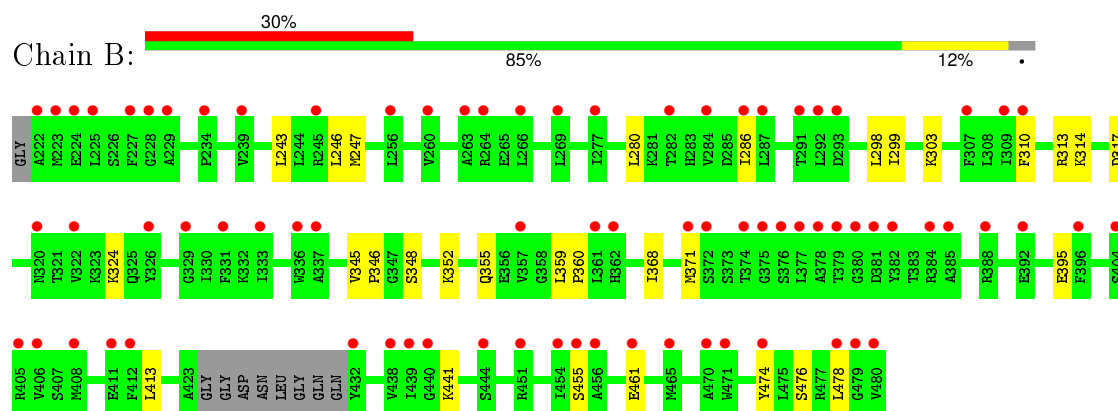
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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: Orotidine 5'- phosphate decarboxylase (OMPdecase)



- Molecule 1: Orotidine 5'- phosphate decarboxylase (OMPdecase)



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	62.02Å 75.91Å 119.55Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	46.96 – 1.85 46.96 – 1.85	Depositor EDS
% Data completeness (in resolution range)	96.0 (46.96-1.85) 96.0 (46.96-1.85)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.35 (at 1.86Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.197 , 0.258 0.210 , 0.270	Depositor DCC
R_{free} test set	2352 reflections (5.28%)	DCC
Wilson B-factor (Å ²)	27.2	Xtriage
Anisotropy	0.116	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 60.8	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtriage
Outliers	0 of 46907 reflections	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	4211	wwPDB-VP
Average B, all atoms (Å ²)	44.0	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 66.02 % 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 6.4597e-06. 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, 0.375 respectively for untwinned datasets, and 0.333, 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: GOL, SO4

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	0.61	0/1971	0.66	0/2658
1	B	0.59	0/2017	0.68	2/2719 (0.1%)
All	All	0.60	0/3988	0.67	2/5377 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	313	ARG	NE-CZ-NH1	5.85	123.23	120.30
1	B	313	ARG	NE-CZ-NH2	-5.49	117.56	120.30

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	1925	0	1983	30	0
1	B	1959	0	2030	22	0
2	A	5	0	0	0	0
2	B	5	0	0	0	0
3	A	6	0	8	1	0
3	B	6	0	8	0	0
4	A	167	0	0	5	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	B	138	0	0	4	0
All	All	4211	0	4029	46	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 (46) 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:371[A]:MET:HE2	4:B:576:HOH:O	1.59	1.02
1:A:324:LYS:HB3	1:B:286[A]:ILE:HG23	1.62	0.82
1:A:371[A]:MET:HE1	4:B:507:HOH:O	1.91	0.69
1:B:474:TYR:CE1	1:B:478:LEU:HD11	2.36	0.60
1:B:474:TYR:O	1:B:478:LEU:HD13	2.02	0.60
1:A:286[A]:ILE:HG21	1:B:324:LYS:HD2	1.85	0.59
1:A:355:GLN:NE2	1:A:395:GLU:OE2	2.34	0.59
1:B:280:LEU:HD22	1:B:298:LEU:HD11	1.85	0.58
1:A:320:ASN:ND2	1:A:324:LYS:CE	2.68	0.57
1:A:324:LYS:CB	1:B:286[A]:ILE:HG23	2.35	0.57
1:A:371[B]:MET:HB2	1:A:376:SER:OG	2.08	0.54
1:A:286[A]:ILE:HG23	1:B:324:LYS:HB3	1.89	0.54
1:A:345:VAL:HG22	1:B:371:MET:CE	2.40	0.52
1:B:395:GLU:CD	1:B:395:GLU:H	2.13	0.52
1:B:455:SER:HB2	4:B:535:HOH:O	2.10	0.51
1:B:348:SER:OG	1:B:352:LYS:HE2	2.11	0.51
1:B:359:LEU:HB2	1:B:360:PRO:HD3	1.92	0.50
1:A:320:ASN:ND2	1:A:324:LYS:NZ	2.60	0.50
1:B:246:LEU:HD12	1:B:247:MET:N	2.27	0.50
1:B:345:VAL:HG12	1:B:346:PRO:HD3	1.94	0.50
1:A:472:GLU:HG2	4:A:615:HOH:O	2.13	0.49
1:B:243:LEU:HD23	1:B:413:LEU:HD13	1.95	0.49
1:A:359:LEU:HB2	1:A:360:PRO:HD3	1.95	0.48
1:A:320:ASN:HD22	1:A:324:LYS:NZ	2.11	0.48
1:A:350:VAL:HG13	1:A:351:VAL:N	2.29	0.47
1:A:345:VAL:HG22	1:B:371:MET:HE1	1.97	0.47
1:A:281:LYS:HZ1	3:A:482:GOL:C2	2.27	0.47
1:A:284[A]:VAL:CG2	1:A:290:PHE:CD1	2.99	0.46
1:A:474:TYR:CE1	1:A:478:LEU:HD11	2.51	0.46
1:B:345:VAL:N	1:B:346:PRO:CD	2.79	0.46
1:A:371[A]:MET:CE	4:B:576:HOH:O	2.39	0.45
1:A:319:GLY:O	1:A:323:LYS:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:314:LYS:HG2	1:B:368:ILE:HD11	1.98	0.45
1:A:455:SER:HB2	4:A:602:HOH:O	2.16	0.45
1:A:320:ASN:ND2	1:A:324:LYS:HE2	2.32	0.44
1:B:299:ILE:O	1:B:303:LYS:HG3	2.18	0.42
1:A:461:GLU:O	1:A:465:MET:HG3	2.18	0.42
1:A:440:GLY:HA3	4:A:583:HOH:O	2.20	0.42
1:A:243:LEU:HD23	1:A:413:LEU:HD13	2.01	0.41
1:B:243:LEU:HD23	1:B:413:LEU:CD1	2.50	0.41
1:B:246:LEU:C	1:B:246:LEU:HD12	2.41	0.41
1:A:383:THR:O	1:A:387:VAL:HG23	2.21	0.41
1:A:451:ARG:NH2	4:A:540:HOH:O	2.54	0.41
1:A:283:HIS:HD2	4:A:485:HOH:O	2.03	0.40
1:B:345:VAL:CG1	1:B:346:PRO:HD3	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	249/260 (96%)	240 (96%)	8 (3%)	1 (0%)	39	22
1	B	256/260 (98%)	251 (98%)	5 (2%)	0	100	100
All	All	505/520 (97%)	491 (97%)	13 (3%)	1 (0%)	52	36

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	378	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	208/210 (99%)	206 (99%)	2 (1%)	82	76
1	B	213/210 (101%)	207 (97%)	6 (3%)	51	33
All	All	421/420 (100%)	413 (98%)	8 (2%)	63	49

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

Mol	Chain	Res	Type
1	A	280	LEU
1	A	317	ASP
1	B	310	PHE
1	B	317	ASP
1	B	355	GLN
1	B	441	LYS
1	B	461	GLU
1	B	476	SER

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

Mol	Chain	Res	Type
1	A	283	HIS
1	A	320	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates

There are no carbohydrates in this entry.

5.6 Ligand geometry

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).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	SO4	A	481	-	4,4,4	0.34	0	6,6,6	0.32	0
3	GOL	A	482	-	5,5,5	0.38	0	5,5,5	0.23	0
2	SO4	B	481	-	4,4,4	0.50	0	6,6,6	0.44	0
3	GOL	B	482	-	5,5,5	0.35	0	5,5,5	0.76	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	SO4	A	481	-	-	0/0/0/0	0/0/0/0
3	GOL	A	482	-	-	0/4/4/4	0/0/0/0
2	SO4	B	481	-	-	0/0/0/0	0/0/0/0
3	GOL	B	482	-	-	0/4/4/4	0/0/0/0

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.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	482	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

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	248/260 (95%)	1.68	76 (30%) 1 0	39, 43, 50, 54	0
1	B	251/260 (96%)	1.79	77 (30%) 1 0	39, 43, 51, 67	0
All	All	499/520 (95%)	1.74	153 (30%) 1 0	39, 43, 50, 67	0

All (153) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	223	MET	12.7
1	B	222	ALA	11.0
1	B	480	VAL	8.3
1	A	479	GLY	7.8
1	A	478	LEU	7.2
1	B	379	THR	6.9
1	B	408	MET	6.1
1	A	387	VAL	5.8
1	B	470	ALA	5.2
1	B	406	VAL	5.0
1	B	388	ARG	4.9
1	A	408	MET	4.6
1	B	381	ASP	4.6
1	B	385	ALA	4.6
1	A	404	SER	4.6
1	A	379	THR	4.4
1	A	436	GLN	4.1
1	B	474	TYR	4.1
1	B	382	TYR	4.0
1	B	432	TYR	3.9
1	A	440	GLY	3.8
1	A	284[A]	VAL	3.8
1	A	391	GLU	3.8
1	A	264	ARG	3.8

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Mol	Chain	Res	Type	RSRZ
1	B	471	TRP	3.8
1	A	438	VAL	3.8
1	B	404	SER	3.7
1	A	388	ARG	3.7
1	B	392	GLU	3.7
1	A	286[A]	ILE	3.6
1	A	474	TYR	3.6
1	B	478	LEU	3.6
1	A	432	TYR	3.6
1	B	384	ARG	3.5
1	B	378	ALA	3.5
1	B	375	GLY	3.5
1	B	439	ILE	3.5
1	A	476	SER	3.5
1	B	229	ALA	3.5
1	A	384	ARG	3.4
1	B	451[A]	ARG	3.4
1	A	381	ASP	3.4
1	A	378	ALA	3.3
1	B	286[A]	ILE	3.3
1	B	412	PHE	3.3
1	A	246	LEU	3.3
1	B	456	ALA	3.3
1	B	333	ILE	3.2
1	A	383	THR	3.2
1	B	440	GLY	3.1
1	B	377	LEU	3.1
1	A	228	GLY	3.0
1	B	455	SER	3.0
1	B	331	PHE	3.0
1	B	438	VAL	2.9
1	A	470	ALA	2.9
1	A	224	GLU	2.9
1	A	278	CYS	2.9
1	A	472	GLU	2.8
1	A	266	LEU	2.8
1	A	334	ALA	2.8
1	A	456	ALA	2.8
1	A	290	PHE	2.8
1	A	372	SER	2.8
1	A	403	GLY	2.8
1	B	374	THR	2.7

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Mol	Chain	Res	Type	RSRZ
1	B	461	GLU	2.7
1	A	333	ILE	2.7
1	A	245	ARG	2.7
1	B	293	ASP	2.7
1	B	284	VAL	2.7
1	A	331	PHE	2.6
1	B	320[A]	ASN	2.6
1	A	412	PHE	2.6
1	A	260	VAL	2.6
1	B	405	ARG	2.6
1	A	362	HIS	2.6
1	B	227	PHE	2.6
1	B	292	LEU	2.6
1	A	329	GLY	2.6
1	B	329	GLY	2.6
1	B	371	MET	2.5
1	B	372	SER	2.5
1	A	357	VAL	2.5
1	A	451	ARG	2.5
1	A	475	LEU	2.5
1	B	234	PRO	2.5
1	B	357	VAL	2.4
1	B	337	ALA	2.4
1	B	224	GLU	2.4
1	A	225	LEU	2.4
1	A	406	VAL	2.4
1	B	260	VAL	2.4
1	B	362	HIS	2.4
1	A	295	MET	2.4
1	B	225	LEU	2.4
1	B	307	PHE	2.4
1	A	371[A]	MET	2.4
1	A	336	TRP	2.3
1	A	460	LEU	2.3
1	A	234	PRO	2.3
1	A	308	LEU	2.3
1	B	277	ILE	2.3
1	B	376	SER	2.3
1	A	337	ALA	2.3
1	A	350	VAL	2.3
1	A	348	SER	2.3
1	A	477	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	454	ILE	2.3
1	A	226	SER	2.2
1	B	287	LEU	2.2
1	A	471	TRP	2.2
1	A	465	MET	2.2
1	A	422	GLU	2.2
1	A	405	ARG	2.2
1	A	344	VAL	2.2
1	B	291	THR	2.2
1	B	336	TRP	2.2
1	B	396	PHE	2.2
1	B	264	ARG	2.2
1	A	243	LEU	2.2
1	A	294	VAL	2.2
1	B	479	GLY	2.2
1	A	233	LEU	2.2
1	B	411	GLU	2.1
1	B	380	GLY	2.1
1	A	229	ALA	2.1
1	B	322	VAL	2.1
1	A	310	PHE	2.1
1	A	292	LEU	2.1
1	B	256	LEU	2.1
1	B	269	LEU	2.1
1	B	228	GLY	2.1
1	A	351	VAL	2.1
1	A	454	ILE	2.1
1	B	444	SER	2.1
1	B	310	PHE	2.1
1	B	309	ILE	2.1
1	A	382	TYR	2.1
1	B	266	LEU	2.1
1	B	326	TYR	2.1
1	A	392	GLU	2.0
1	B	263	ALA	2.0
1	A	455	SER	2.0
1	B	361	LEU	2.0
1	A	255	CYS	2.0
1	B	239	VAL	2.0
1	B	282	THR	2.0
1	B	465[A]	MET	2.0
1	B	245	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	269	LEU	2.0
1	A	335	SER	2.0
1	A	302	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, 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	LLDF	B-factors(Å ²)	Q<0.9
3	GOL	B	482	6/6	0.65	0.29	6.97	47,53,53,54	0
3	GOL	A	482	6/6	0.87	0.22	1.73	47,51,52,52	0
2	SO4	A	481	5/5	0.93	0.23	0.82	57,58,58,59	0
2	SO4	B	481	5/5	0.94	0.24	0.22	54,55,57,58	0

6.5 Other polymers [i](#)

There are no such residues in this entry.