



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 14, 2017 – 01:47 am GMT

PDB ID : 4OMT
Title : Crystal structure of human muscle phosphofructokinase (dissociated homodimer)
Authors : Kloos, M.; Straeter, N.
Deposited on : 2014-01-27
Resolution : 6.00 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
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

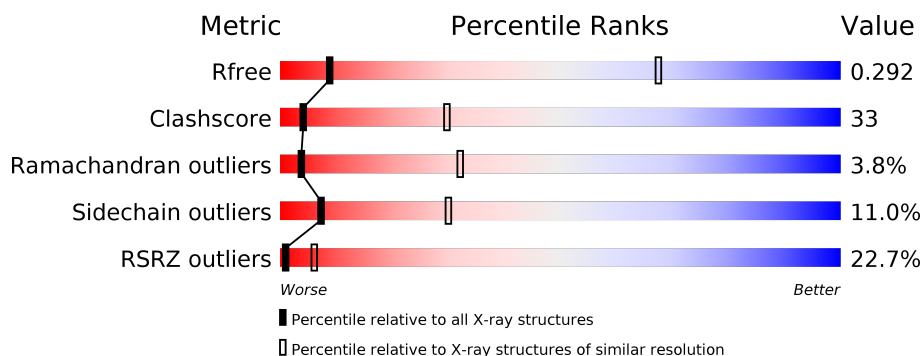
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 6.00 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}	100719	1085 (8.30-3.70)
Clashscore	112137	1017 (8.20-3.80)
Ramachandran outliers	110173	1001 (8.20-3.72)
Sidechain outliers	110143	1085 (8.30-3.70)
RSRZ outliers	101464	1094 (8.30-3.70)

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	780	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 5715 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 6-phosphofructokinase, muscle type.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	748	5715	3590	1018	1070	37	0	0	0

P722	V723	A724	E725	L726	K727	D728	Q729	I730	D731	H734	R735	I736	P737	Q740	N741	W742	L745	R746	P747	I748	L749	K750	I751	L752	A753	K754	Y755	GLU	ILE	ASP	LEU	ASP	THR	SER	ASP	HIS	ALA	HIS	LEU	GLU	HIS	ILE	THR	ARG	LYS	ARG	SER	GLY	GLU	ALA	ALA	VAL
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4 Data and refinement statistics

Property	Value	Source
Space group	P 62 2 2	Depositor
Cell constants a, b, c, α , β , γ	229.70Å 229.70Å 133.00Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	46.95 – 6.00 46.95 – 6.00	Depositor EDS
% Data completeness (in resolution range)	99.7 (46.95-6.00) 99.9 (46.95-6.00)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	0.12	Depositor
$\langle I/\sigma(I) \rangle$ ¹	4.55 (at 6.15Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.2_1309)	Depositor
R, R_{free}	0.238 , 0.274 0.253 , 0.292	Depositor DCC
R_{free} test set	525 reflections (9.53%)	DCC
Wilson B-factor (Å ²)	268.6	Xtriage
Anisotropy	0.508	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 215.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.80	EDS
Total number of atoms	5715	wwPDB-VP
Average B, all atoms (Å ²)	194.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.61% 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](#)

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	2/5813 (0.0%)	0.72	10/7846 (0.1%)

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 (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	394	PRO	C-N	11.00	1.59	1.34
1	A	252	THR	CA-CB	5.18	1.66	1.53

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	394	PRO	CA-C-N	-8.24	99.07	117.20
1	A	79	LEU	CA-CB-CG	6.01	129.13	115.30
1	A	136	LEU	CA-CB-CG	5.40	127.72	115.30
1	A	99	LEU	CA-CB-CG	5.33	127.56	115.30
1	A	728	ASP	CB-CG-OD2	5.24	123.01	118.30
1	A	147	ASP	CB-CG-OD2	5.21	122.98	118.30
1	A	278	ASP	CB-CG-OD2	5.20	122.98	118.30
1	A	238	ASP	CB-CG-OD2	5.14	122.92	118.30
1	A	523	VAL	CB-CA-C	-5.13	101.66	111.40
1	A	135	LEU	CA-CB-CG	5.02	126.85	115.30

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	394	PRO	Mainchain

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	5715	0	5754	375	1
All	All	5715	0	5754	375	1

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 33.

All (375) 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:407:ASN:CB	1:A:469:THR:HG22	1.42	1.45
1:A:407:ASN:HB3	1:A:469:THR:CG2	1.54	1.35
1:A:275:THR:CG2	1:A:278:ASP:OD2	1.75	1.35
1:A:275:THR:HG21	1:A:278:ASP:OD2	1.24	1.31
1:A:109:GLY:HA2	1:A:152:LYS:NZ	1.42	1.29
1:A:246:ARG:O	1:A:250:THR:HG22	1.34	1.26
1:A:275:THR:HG23	1:A:278:ASP:CB	1.67	1.25
1:A:275:THR:CG2	1:A:278:ASP:CG	2.07	1.22
1:A:186:MET:CE	1:A:673:ARG:NH1	2.03	1.22
1:A:236:ASP:HA	1:A:269:LYS:CG	1.53	1.19
1:A:407:ASN:HB2	1:A:469:THR:HG22	1.33	1.09
1:A:186:MET:HE1	1:A:673:ARG:HH11	1.12	1.08
1:A:275:THR:HG23	1:A:278:ASP:HB2	1.17	1.07
1:A:99:LEU:O	1:A:103:TYR:CD2	2.08	1.05
1:A:186:MET:HE1	1:A:673:ARG:NH1	1.66	1.03
1:A:275:THR:HG21	1:A:278:ASP:CG	1.73	1.03
1:A:280:LYS:HE3	1:A:284:VAL:HG21	1.42	1.02
1:A:236:ASP:CA	1:A:269:LYS:HG2	1.90	1.01
1:A:35:ARG:HH12	1:A:752:LEU:HD13	1.22	1.01
1:A:236:ASP:HA	1:A:269:LYS:HG2	1.02	1.01
1:A:44:THR:HG21	1:A:325:LEU:HD11	1.41	1.00
1:A:175:THR:O	1:A:178:THR:HG22	1.63	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:233:CYS:HB2	1:A:371:LEU:HD21	1.45	0.97
1:A:247:LEU:O	1:A:250:THR:HG23	1.63	0.97
1:A:245:ARG:O	1:A:249:GLU:HG3	1.65	0.96
1:A:569:ILE:HD12	1:A:641:PHE:HA	1.48	0.96
1:A:407:ASN:CB	1:A:469:THR:CG2	2.25	0.95
1:A:407:ASN:HB3	1:A:469:THR:HG22	0.97	0.94
1:A:392:ARG:HB3	1:A:393:PRO:CA	1.97	0.94
1:A:109:GLY:HA2	1:A:152:LYS:HZ3	1.21	0.93
1:A:109:GLY:HA2	1:A:152:LYS:HZ1	1.18	0.93
1:A:335:VAL:HG23	1:A:348:LEU:HG	1.51	0.92
1:A:340:GLY:HA2	1:A:716:ARG:HA	1.49	0.92
1:A:275:THR:HG23	1:A:278:ASP:CG	1.78	0.91
1:A:99:LEU:HB2	1:A:103:TYR:HE2	1.36	0.91
1:A:233:CYS:SG	1:A:371:LEU:HD11	2.12	0.90
1:A:745:LEU:O	1:A:748:ILE:HG12	1.71	0.90
1:A:426:GLY:HA2	1:A:684:MET:HE3	1.52	0.90
1:A:407:ASN:HB3	1:A:469:THR:HG21	1.54	0.88
1:A:109:GLY:CA	1:A:152:LYS:NZ	2.35	0.88
1:A:275:THR:CG2	1:A:278:ASP:CB	2.48	0.88
1:A:506:LEU:HD22	1:A:727:LYS:HE2	1.56	0.88
1:A:275:THR:CG2	1:A:278:ASP:HB2	2.04	0.87
1:A:8:ALA:N	1:A:9:ALA:HA	1.89	0.87
1:A:99:LEU:O	1:A:103:TYR:HD2	1.55	0.86
1:A:225:ALA:HB2	1:A:261:ILE:HD13	1.57	0.86
1:A:186:MET:HE3	1:A:673:ARG:NH1	1.90	0.86
1:A:109:GLY:CA	1:A:152:LYS:HZ1	1.88	0.85
1:A:236:ASP:CA	1:A:269:LYS:CG	2.49	0.84
1:A:392:ARG:HB3	1:A:393:PRO:HA	1.57	0.84
1:A:609:VAL:C	1:A:611:HIS:H	1.82	0.81
1:A:99:LEU:C	1:A:103:TYR:CD2	2.54	0.81
1:A:241:GLU:O	1:A:245:ARG:HB3	1.81	0.80
1:A:609:VAL:O	1:A:611:HIS:N	2.14	0.80
1:A:33:ALA:O	1:A:37:VAL:HG23	1.82	0.80
1:A:392:ARG:CB	1:A:393:PRO:HA	2.10	0.80
1:A:28:GLN:H	1:A:28:GLN:HE21	1.27	0.80
1:A:524:VAL:HB	1:A:710:VAL:HG22	1.64	0.80
1:A:186:MET:CE	1:A:673:ARG:HH11	1.77	0.80
1:A:82:THR:HG21	1:A:86:SER:HB2	1.64	0.79
1:A:99:LEU:HB2	1:A:103:TYR:CE2	2.19	0.78
1:A:275:THR:HG22	1:A:278:ASP:OD2	1.81	0.78
1:A:247:LEU:HA	1:A:250:THR:CG2	2.13	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:726:LEU:O	1:A:730:THR:HG22	1.84	0.77
1:A:182:LEU:O	1:A:186:MET:HG2	1.85	0.77
1:A:236:ASP:HA	1:A:269:LYS:HG3	1.62	0.76
1:A:340:GLY:CA	1:A:716:ARG:HA	2.15	0.76
1:A:100:ARG:HA	1:A:103:TYR:HD2	1.52	0.75
1:A:106:VAL:HG13	1:A:152:LYS:HD2	1.67	0.75
1:A:100:ARG:HA	1:A:103:TYR:CD2	2.22	0.74
1:A:202:THR:HG23	1:A:258:ASN:HB2	1.66	0.74
1:A:403:VAL:HG21	1:A:684:MET:HE1	1.69	0.73
1:A:39:ARG:HD2	1:A:70:TRP:CE2	2.23	0.73
1:A:393:PRO:HG3	1:A:453:TRP:HB2	1.71	0.72
1:A:218:VAL:HG13	1:A:674:ASN:HD21	1.55	0.72
1:A:237:ASP:OD1	1:A:269:LYS:NZ	2.14	0.72
1:A:393:PRO:HB3	1:A:453:TRP:CE3	2.24	0.71
1:A:287:LEU:HB3	1:A:289:TYR:CE1	2.26	0.71
1:A:99:LEU:C	1:A:103:TYR:HD2	1.90	0.71
1:A:244:CYS:HB3	1:A:287:LEU:HD23	1.72	0.71
1:A:280:LYS:HE3	1:A:284:VAL:CG2	2.19	0.71
1:A:459:TRP:CH2	1:A:466:LYS:HB3	2.25	0.71
1:A:73:VAL:HA	1:A:76:MET:SD	2.31	0.71
1:A:280:LYS:CE	1:A:284:VAL:HG21	2.20	0.71
1:A:335:VAL:HG12	1:A:335:VAL:O	1.90	0.70
1:A:500:GLU:HA	1:A:503:THR:HB	1.73	0.70
1:A:646:GLU:HA	1:A:649:LYS:HD3	1.73	0.70
1:A:9:ALA:O	1:A:11:THR:HG22	1.92	0.70
1:A:11:THR:HA	1:A:14:ILE:HD12	1.73	0.69
1:A:175:THR:O	1:A:178:THR:CG2	2.40	0.69
1:A:243:LEU:O	1:A:247:LEU:HG	1.92	0.69
1:A:106:VAL:CG1	1:A:152:LYS:HD2	2.21	0.69
1:A:280:LYS:O	1:A:284:VAL:HG23	1.92	0.69
1:A:392:ARG:CB	1:A:393:PRO:CA	2.68	0.69
1:A:267:ILE:HA	1:A:273:PRO:HA	1.74	0.69
1:A:528:THR:HG21	1:A:532:ASN:OD1	1.93	0.69
1:A:33:ALA:HA	1:A:313:GLY:O	1.93	0.68
1:A:215:LEU:HD12	1:A:215:LEU:H	1.57	0.68
1:A:112:ASN:HB3	1:A:324:LEU:HD22	1.74	0.68
1:A:440:PHE:C	1:A:442:GLY:H	1.96	0.68
1:A:531:ASN:HA	1:A:539:SER:OG	1.94	0.68
1:A:106:VAL:HG13	1:A:152:LYS:CD	2.23	0.67
1:A:485:ILE:HG12	1:A:517:GLU:HB3	1.78	0.66
1:A:55:TYR:OH	1:A:125:ALA:HB2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:268:ASP:HB3	1:A:274:ILE:HD11	1.77	0.66
1:A:82:THR:CG2	1:A:86:SER:HB2	2.26	0.65
1:A:566:ARG:HD2	1:A:653:ASP:HB3	1.78	0.65
1:A:247:LEU:C	1:A:250:THR:HG23	2.17	0.65
1:A:18:ILE:HG22	1:A:112:ASN:HB2	1.77	0.65
1:A:392:ARG:HB3	1:A:393:PRO:C	2.16	0.65
1:A:609:VAL:C	1:A:611:HIS:N	2.50	0.64
1:A:252:THR:C	1:A:254:GLY:N	2.49	0.64
1:A:20:VAL:HG23	1:A:114:CYS:HB3	1.80	0.64
1:A:252:THR:C	1:A:254:GLY:H	2.01	0.63
1:A:113:LEU:HB3	1:A:158:ILE:HG22	1.81	0.63
1:A:602:ILE:HD12	1:A:605:LEU:HB3	1.81	0.63
1:A:423:VAL:HG22	1:A:433:VAL:HG11	1.80	0.63
1:A:252:THR:O	1:A:254:GLY:N	2.32	0.63
1:A:40:VAL:HB	1:A:321:VAL:HG21	1.80	0.63
1:A:100:ARG:CA	1:A:103:TYR:HD2	2.12	0.62
1:A:244:CYS:HB3	1:A:287:LEU:CD2	2.28	0.62
1:A:415:MET:SD	1:A:469:THR:HG21	2.40	0.62
1:A:392:ARG:NH1	1:A:394:PRO:HG3	2.15	0.62
1:A:418:ALA:HA	1:A:676:ALA:O	2.00	0.62
1:A:36:ALA:O	1:A:40:VAL:HG23	2.00	0.61
1:A:506:LEU:HD22	1:A:727:LYS:CE	2.30	0.61
1:A:35:ARG:NH1	1:A:752:LEU:HD13	2.05	0.61
1:A:242:HIS:HA	1:A:245:ARG:HD2	1.82	0.61
1:A:525:ILE:HG23	1:A:679:MET:SD	2.41	0.61
1:A:280:LYS:HD3	1:A:280:LYS:C	2.21	0.61
1:A:630:LYS:O	1:A:632:ASN:N	2.34	0.60
1:A:69:THR:O	1:A:72:SER:OG	2.16	0.60
1:A:225:ALA:HB2	1:A:261:ILE:CD1	2.29	0.60
1:A:340:GLY:O	1:A:715:LYS:O	2.20	0.60
1:A:465:SER:OG	1:A:469:THR:HG23	2.01	0.60
1:A:556:ILE:HG21	1:A:570:ILE:HD11	1.84	0.59
1:A:103:TYR:CD2	1:A:139:LEU:CD1	2.86	0.59
1:A:337:SER:O	1:A:344:VAL:HG22	2.02	0.59
1:A:52:HIS:HA	1:A:84:ILE:O	2.03	0.59
1:A:186:MET:CE	1:A:673:ARG:HH12	2.08	0.58
1:A:99:LEU:CB	1:A:103:TYR:HE2	2.12	0.58
1:A:58:LEU:HG	1:A:101:ALA:HB1	1.85	0.58
1:A:39:ARG:HD2	1:A:70:TRP:CZ2	2.39	0.58
1:A:35:ARG:HH12	1:A:752:LEU:CD1	2.07	0.58
1:A:481:ILE:O	1:A:485:ILE:HG23	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:367:PHE:O	1:A:371:LEU:HG	2.03	0.57
1:A:186:MET:HE3	1:A:673:ARG:HH12	1.64	0.57
1:A:440:PHE:C	1:A:442:GLY:N	2.58	0.57
1:A:475:LYS:HA	1:A:478:PHE:CE2	2.40	0.57
1:A:722:PRO:HG2	1:A:725:GLU:HB2	1.87	0.57
1:A:247:LEU:CA	1:A:250:THR:CG2	2.83	0.57
1:A:296:LEU:CD1	1:A:296:LEU:H	2.17	0.57
1:A:340:GLY:O	1:A:715:LYS:C	2.43	0.57
1:A:11:THR:HA	1:A:14:ILE:CD1	2.35	0.56
1:A:401:HIS:ND1	1:A:491:GLN:NE2	2.53	0.56
1:A:502:TYR:OH	1:A:730:THR:HG21	2.06	0.56
1:A:250:THR:O	1:A:255:SER:OG	2.19	0.56
1:A:27:ALA:O	1:A:30:MET:HG3	2.05	0.56
1:A:218:VAL:HG13	1:A:674:ASN:ND2	2.21	0.56
1:A:426:GLY:CA	1:A:684:MET:HE3	2.31	0.55
1:A:605:LEU:O	1:A:609:VAL:HG23	2.06	0.55
1:A:271:GLY:O	1:A:273:PRO:HD3	2.06	0.55
1:A:432:ARG:HD2	1:A:450:GLU:OE2	2.06	0.55
1:A:481:ILE:O	1:A:485:ILE:CG2	2.54	0.55
1:A:111:THR:HG23	1:A:112:ASN:ND2	2.21	0.55
1:A:516:ASP:HA	1:A:519:CYS:SG	2.46	0.55
1:A:628:ASN:HB3	1:A:631:CYS:HB3	1.87	0.55
1:A:252:THR:HG23	1:A:253:ARG:N	2.22	0.54
1:A:182:LEU:HA	1:A:185:ILE:HD12	1.88	0.54
1:A:296:LEU:HD12	1:A:296:LEU:H	1.71	0.54
1:A:569:ILE:CD1	1:A:641:PHE:HA	2.29	0.54
1:A:99:LEU:C	1:A:103:TYR:CE2	2.80	0.54
1:A:102:ALA:HA	1:A:105:LEU:HD12	1.89	0.54
1:A:28:GLN:H	1:A:28:GLN:NE2	2.01	0.54
1:A:39:ARG:NH1	1:A:752:LEU:O	2.40	0.54
1:A:540:VAL:HG11	1:A:676:ALA:HB2	1.90	0.54
1:A:443:LEU:HA	1:A:448:ILE:HD11	1.89	0.54
1:A:99:LEU:O	1:A:139:LEU:HD11	2.07	0.53
1:A:158:ILE:H	1:A:158:ILE:HD13	1.74	0.53
1:A:245:ARG:O	1:A:249:GLU:CG	2.50	0.53
1:A:251:ARG:HG3	1:A:289:TYR:HE2	1.72	0.53
1:A:402:THR:HB	1:A:432:ARG:HE	1.73	0.53
1:A:13:GLY:CA	1:A:325:LEU:HD22	2.39	0.53
1:A:16:LYS:HD2	1:A:112:ASN:HD21	1.73	0.53
1:A:532:ASN:O	1:A:737:PRO:HD3	2.08	0.53
1:A:23:SER:HB3	1:A:121:SER:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:316:MET:SD	1:A:337:SER:HA	2.49	0.53
1:A:268:ASP:HB3	1:A:274:ILE:CD1	2.38	0.53
1:A:277:GLU:O	1:A:280:LYS:HB3	2.08	0.53
1:A:523:VAL:HG22	1:A:686:TRP:CZ3	2.44	0.53
1:A:44:THR:CG2	1:A:325:LEU:HD11	2.27	0.53
1:A:33:ALA:HB3	1:A:116:ILE:HD13	1.90	0.52
1:A:475:LYS:HA	1:A:478:PHE:CZ	2.43	0.52
1:A:73:VAL:HG12	1:A:76:MET:SD	2.49	0.52
1:A:69:THR:HG22	1:A:72:SER:HB3	1.92	0.52
1:A:40:VAL:HG21	1:A:318:VAL:HG22	1.91	0.52
1:A:350:GLU:O	1:A:354:VAL:HG23	2.10	0.51
1:A:495:ILE:HB	1:A:524:VAL:HG22	1.92	0.51
1:A:348:LEU:O	1:A:352:VAL:HG23	2.11	0.51
1:A:443:LEU:HD22	1:A:490:ILE:HD13	1.92	0.51
1:A:290:ASP:CG	1:A:290:ASP:O	2.49	0.51
1:A:44:THR:HG21	1:A:325:LEU:CD1	2.28	0.51
1:A:475:LYS:C	1:A:477:SER:H	2.14	0.51
1:A:21:LEU:HD11	1:A:55:TYR:HA	1.92	0.51
1:A:335:VAL:CG1	1:A:335:VAL:O	2.58	0.51
1:A:579:TYR:HD1	1:A:742:TRP:CD1	2.29	0.51
1:A:246:ARG:NH2	1:A:389:ALA:O	2.44	0.51
1:A:545:ALA:O	1:A:548:THR:HB	2.11	0.51
1:A:418:ALA:O	1:A:419:VAL:C	2.49	0.51
1:A:136:LEU:O	1:A:140:GLN:HB2	2.11	0.51
1:A:630:LYS:C	1:A:632:ASN:H	2.13	0.51
1:A:153:SER:C	1:A:155:TYR:H	2.14	0.51
1:A:287:LEU:HB3	1:A:289:TYR:CD1	2.45	0.51
1:A:275:THR:OG1	1:A:277:GLU:HG2	2.11	0.50
1:A:422:THR:HA	1:A:680:GLY:O	2.11	0.50
1:A:244:CYS:O	1:A:248:SER:OG	2.29	0.50
1:A:723:VAL:HG23	1:A:724:ALA:H	1.76	0.50
1:A:240:GLU:HB3	1:A:282:LEU:HD11	1.93	0.50
1:A:112:ASN:HB3	1:A:324:LEU:HD13	1.93	0.50
1:A:103:TYR:CD2	1:A:139:LEU:HD11	2.43	0.50
1:A:314:SER:O	1:A:318:VAL:HG23	2.12	0.50
1:A:529:VAL:HG13	1:A:545:ALA:CB	2.42	0.50
1:A:162:VAL:CG1	1:A:175:THR:HG22	2.42	0.49
1:A:432:ARG:HD2	1:A:450:GLU:CD	2.32	0.49
1:A:482:SER:HA	1:A:485:ILE:HG23	1.94	0.49
1:A:104:ASN:O	1:A:108:ARG:HG2	2.11	0.49
1:A:311:ILE:O	1:A:315:ARG:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:239:TRP:CD1	1:A:239:TRP:C	2.86	0.49
1:A:668:PRO:HG2	1:A:673:ARG:HE	1.78	0.49
1:A:436:VAL:HG13	1:A:442:GLY:HA3	1.95	0.49
1:A:8:ALA:N	1:A:9:ALA:CA	2.69	0.49
1:A:13:GLY:HA3	1:A:325:LEU:HD22	1.95	0.49
1:A:69:THR:CG2	1:A:72:SER:HB3	2.43	0.49
1:A:435:VAL:HG13	1:A:467:LEU:HD13	1.95	0.48
1:A:210:ARG:HG3	1:A:211:HIS:H	1.78	0.48
1:A:558:GLN:O	1:A:559:SER:O	2.32	0.48
1:A:711:LEU:HD11	1:A:718:LEU:HG	1.95	0.48
1:A:475:LYS:HG3	1:A:478:PHE:CE1	2.49	0.48
1:A:426:GLY:HA2	1:A:684:MET:CE	2.36	0.48
1:A:602:ILE:HB	1:A:635:TYR:OH	2.14	0.48
1:A:392:ARG:HB2	1:A:393:PRO:HA	1.92	0.47
1:A:35:ARG:HG3	1:A:73:VAL:HB	1.96	0.47
1:A:648:GLY:HA3	1:A:652:PHE:CZ	2.49	0.47
1:A:18:ILE:O	1:A:18:ILE:HG13	2.14	0.47
1:A:41:GLY:O	1:A:44:THR:HG22	2.13	0.47
1:A:746:ARG:N	1:A:747:PRO:HD2	2.29	0.47
1:A:159:VAL:HG11	1:A:320:ALA:HA	1.96	0.47
1:A:35:ARG:HD3	1:A:77:LEU:HD13	1.95	0.47
1:A:61:GLY:HA2	1:A:65:ILE:HD11	1.96	0.47
1:A:723:VAL:HG23	1:A:724:ALA:N	2.30	0.47
1:A:395:VAL:HG12	1:A:396:SER:N	2.30	0.47
1:A:424:ARG:O	1:A:425:ILE:C	2.52	0.47
1:A:475:LYS:O	1:A:477:SER:N	2.48	0.47
1:A:316:MET:CE	1:A:337:SER:HA	2.45	0.47
1:A:126:ASP:HB2	1:A:348:LEU:HD22	1.96	0.47
1:A:57:GLY:CA	1:A:64:HIS:HB3	2.45	0.47
1:A:40:VAL:O	1:A:44:THR:HG22	2.15	0.46
1:A:518:LEU:C	1:A:520:ILE:H	2.18	0.46
1:A:225:ALA:CB	1:A:261:ILE:HD13	2.38	0.46
1:A:459:TRP:CH2	1:A:466:LYS:CB	2.97	0.46
1:A:403:VAL:HG13	1:A:687:MET:HE1	1.97	0.46
1:A:734:HIS:O	1:A:736:ILE:HG23	2.16	0.46
1:A:103:TYR:CD1	1:A:139:LEU:HD13	2.51	0.46
1:A:492:GLY:HA3	1:A:691:ILE:HD11	1.98	0.46
1:A:52:HIS:O	1:A:57:GLY:HA3	2.15	0.46
1:A:55:TYR:O	1:A:58:LEU:HB3	2.15	0.46
1:A:311:ILE:HD13	1:A:583:MET:CE	2.46	0.46
1:A:340:GLY:O	1:A:341:ASN:CB	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:425:ILE:O	1:A:428:ILE:HG22	2.15	0.46
1:A:126:ASP:OD1	1:A:349:MET:HG2	2.16	0.45
1:A:669:THR:HB	1:A:670:PRO:HD2	1.98	0.45
1:A:13:GLY:O	1:A:16:LYS:HB2	2.16	0.45
1:A:436:VAL:HG22	1:A:448:ILE:HG12	1.98	0.45
1:A:280:LYS:HA	1:A:291:THR:HG21	1.98	0.45
1:A:242:HIS:HA	1:A:245:ARG:CD	2.46	0.45
1:A:535:GLY:O	1:A:712:GLY:HA3	2.16	0.45
1:A:159:VAL:HG22	1:A:334:CYS:HB3	1.99	0.45
1:A:549:ILE:O	1:A:553:CYS:SG	2.72	0.45
1:A:78:GLN:OE1	1:A:78:GLN:N	2.46	0.45
1:A:280:LYS:HB2	1:A:293:VAL:HG23	1.98	0.45
1:A:724:ALA:HA	1:A:727:LYS:HE3	1.99	0.45
1:A:183:HIS:O	1:A:187:GLU:HG3	2.16	0.45
1:A:247:LEU:HA	1:A:250:THR:HG23	1.98	0.45
1:A:340:GLY:CA	1:A:716:ARG:CA	2.93	0.45
1:A:109:GLY:CA	1:A:152:LYS:HZ3	2.10	0.44
1:A:403:VAL:HG13	1:A:687:MET:CE	2.47	0.44
1:A:553:CYS:O	1:A:557:LYS:HG2	2.17	0.44
1:A:322:MET:HB3	1:A:345:ARG:HH21	1.81	0.44
1:A:407:ASN:HB2	1:A:469:THR:CG2	2.20	0.44
1:A:100:ARG:N	1:A:103:TYR:HD2	2.15	0.44
1:A:602:ILE:HA	1:A:605:LEU:HB3	1.99	0.44
1:A:498:GLY:HA2	1:A:528:THR:HB	2.00	0.44
1:A:160:GLY:HA3	1:A:335:VAL:HG22	1.98	0.44
1:A:529:VAL:HG13	1:A:545:ALA:HB2	1.99	0.44
1:A:557:LYS:HZ3	1:A:557:LYS:HB3	1.82	0.44
1:A:22:THR:HG21	1:A:82:THR:HG1	1.82	0.44
1:A:122:LEU:HD22	1:A:160:GLY:HA3	1.99	0.44
1:A:216:ALA:O	1:A:219:THR:HG22	2.18	0.44
1:A:196:ALA:HB3	1:A:257:LEU:HD22	2.00	0.44
1:A:264:GLU:C	1:A:266:ALA:H	2.19	0.44
1:A:34:VAL:O	1:A:35:ARG:C	2.56	0.44
1:A:311:ILE:HG21	1:A:583:MET:HE1	2.00	0.44
1:A:246:ARG:O	1:A:250:THR:CG2	2.30	0.44
1:A:172:THR:CB	1:A:337:SER:HB2	2.48	0.44
1:A:475:LYS:C	1:A:477:SER:N	2.71	0.44
1:A:630:LYS:C	1:A:632:ASN:N	2.72	0.44
1:A:252:THR:CG2	1:A:253:ARG:N	2.80	0.43
1:A:569:ILE:HG12	1:A:625:VAL:HB	2.01	0.43
1:A:506:LEU:CD2	1:A:727:LYS:CE	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:221:LEU:HD13	1:A:385:TYR:HA	2.00	0.43
1:A:481:ILE:HG13	1:A:482:SER:N	2.34	0.43
1:A:55:TYR:OH	1:A:115:VAL:HG11	2.18	0.43
1:A:40:VAL:HG12	1:A:321:VAL:HG11	2.00	0.43
1:A:169:PHE:CZ	1:A:351:CYS:HB3	2.53	0.43
1:A:391:VAL:O	1:A:391:VAL:HG12	2.18	0.43
1:A:422:THR:O	1:A:684:MET:HG2	2.19	0.43
1:A:443:LEU:CD2	1:A:490:ILE:HD13	2.48	0.43
1:A:580:LEU:O	1:A:581:ALA:C	2.57	0.43
1:A:22:THR:HG21	1:A:82:THR:OG1	2.18	0.43
1:A:227:TRP:HB3	1:A:260:ILE:HG23	2.00	0.43
1:A:247:LEU:HA	1:A:247:LEU:HD23	1.78	0.43
1:A:284:VAL:HG22	1:A:291:THR:OG1	2.19	0.43
1:A:236:ASP:CB	1:A:269:LYS:HG2	2.48	0.43
1:A:379:MET:O	1:A:383:GLU:HG2	2.19	0.43
1:A:403:VAL:O	1:A:434:LEU:N	2.36	0.43
1:A:406:MET:SD	1:A:495:ILE:HG12	2.59	0.43
1:A:58:LEU:HD23	1:A:92:PHE:CE1	2.54	0.43
1:A:247:LEU:C	1:A:250:THR:CG2	2.87	0.42
1:A:352:VAL:HA	1:A:355:THR:HG22	2.00	0.42
1:A:50:PHE:CZ	1:A:84:ILE:HD11	2.54	0.42
1:A:19:ALA:HA	1:A:49:PHE:O	2.19	0.42
1:A:268:ASP:O	1:A:269:LYS:C	2.57	0.42
1:A:485:ILE:HG13	1:A:486:THR:N	2.23	0.42
1:A:505:GLY:O	1:A:508:LEU:HB2	2.20	0.42
1:A:61:GLY:HA2	1:A:65:ILE:CD1	2.49	0.42
1:A:567:VAL:N	1:A:653:ASP:O	2.48	0.42
1:A:181:ALA:O	1:A:185:ILE:HG13	2.19	0.42
1:A:600:PHE:N	1:A:600:PHE:CD1	2.87	0.42
1:A:402:THR:HB	1:A:432:ARG:HB3	2.00	0.42
1:A:436:VAL:CG1	1:A:442:GLY:HA3	2.49	0.42
1:A:103:TYR:CG	1:A:139:LEU:HD13	2.55	0.42
1:A:180:SER:O	1:A:183:HIS:HB2	2.20	0.42
1:A:247:LEU:CA	1:A:250:THR:HG23	2.49	0.42
1:A:251:ARG:HG3	1:A:289:TYR:CE2	2.54	0.42
1:A:208:MET:HB2	1:A:300:GLN:OE1	2.20	0.42
1:A:485:ILE:HA	1:A:490:ILE:HD12	2.01	0.42
1:A:572:THR:HG21	1:A:581:ALA:HA	2.01	0.42
1:A:310:ARG:HD2	1:A:587:ALA:O	2.19	0.42
1:A:571:GLU:HA	1:A:627:ARG:O	2.19	0.42
1:A:55:TYR:O	1:A:59:VAL:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:358:VAL:HG22	1:A:373:LEU:HB3	2.01	0.41
1:A:36:ALA:O	1:A:37:VAL:C	2.58	0.41
1:A:724:ALA:HA	1:A:727:LYS:HG3	2.02	0.41
1:A:103:TYR:OH	1:A:139:LEU:HA	2.20	0.41
1:A:609:VAL:HG22	1:A:644:TYR:CZ	2.55	0.41
1:A:140:GLN:OE1	1:A:146:THR:HB	2.20	0.41
1:A:333:ALA:HB1	1:A:348:LEU:HD13	2.01	0.41
1:A:306:SER:O	1:A:307:ALA:C	2.59	0.41
1:A:747:PRO:O	1:A:750:LYS:HB2	2.21	0.41
1:A:20:VAL:HG22	1:A:21:LEU:N	2.36	0.41
1:A:296:LEU:N	1:A:296:LEU:HD12	2.34	0.41
1:A:159:VAL:HA	1:A:334:CYS:O	2.20	0.41
1:A:385:TYR:O	1:A:389:ALA:N	2.54	0.41
1:A:214:TYR:O	1:A:215:LEU:C	2.57	0.41
1:A:287:LEU:HB3	1:A:289:TYR:HE1	1.79	0.41
1:A:207:VAL:HG12	1:A:296:LEU:HD22	2.02	0.41
1:A:440:PHE:CD1	1:A:474:PRO:HD3	2.55	0.41
1:A:533:VAL:HA	1:A:534:PRO:HD3	1.96	0.41
1:A:646:GLU:O	1:A:649:LYS:HB2	2.21	0.41
1:A:172:THR:HB	1:A:337:SER:CB	2.51	0.40
1:A:726:LEU:HD23	1:A:729:GLN:OE1	2.22	0.40
1:A:122:LEU:HD22	1:A:160:GLY:CA	2.52	0.40
1:A:106:VAL:HG13	1:A:152:LYS:HD3	2.00	0.40
1:A:340:GLY:O	1:A:715:LYS:HA	2.20	0.40
1:A:9:ALA:O	1:A:11:THR:CG2	2.64	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:396:SER:CB	1:A:396:SER:CB[4_665]	2.11	0.09

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	746/780 (96%)	619 (83%)	99 (13%)	28 (4%)	4	32

All (28) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	10	LYS
1	A	153	SER
1	A	392	ARG
1	A	444	ALA
1	A	559	SER
1	A	610	GLU
1	A	631	CYS
1	A	34	VAL
1	A	143	GLY
1	A	198	SER
1	A	208	MET
1	A	297	GLY
1	A	390	HIS
1	A	663	GLN
1	A	142	ALA
1	A	196	ALA
1	A	565	ARG
1	A	754	LYS
1	A	60	ASP
1	A	154	SER
1	A	214	TYR
1	A	476	LYS
1	A	62	GLY
1	A	253	ARG
1	A	269	LYS
1	A	341	ASN
1	A	365	LYS
1	A	419	VAL

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	607/635 (96%)	540 (89%)	67 (11%)	7	30

All (67) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	18	ILE
1	A	22	THR
1	A	28	GLN
1	A	64	HIS
1	A	73	VAL
1	A	77	LEU
1	A	78	GLN
1	A	86	SER
1	A	119	ASP
1	A	126	ASP
1	A	129	ARG
1	A	136	LEU
1	A	138	ASP
1	A	140	GLN
1	A	153	SER
1	A	158	ILE
1	A	164	SER
1	A	165	ILE
1	A	170	CYS
1	A	178	THR
1	A	192	ILE
1	A	193	THR
1	A	208	MET
1	A	226	ASP
1	A	233	CYS
1	A	242	HIS
1	A	245	ARG
1	A	248	SER
1	A	250	THR
1	A	253	ARG
1	A	260	ILE
1	A	275	THR
1	A	277	GLU
1	A	280	LYS
1	A	290	ASP

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Mol	Chain	Res	Type
1	A	304	THR
1	A	337	SER
1	A	348	LEU
1	A	402	THR
1	A	428	ILE
1	A	447	GLN
1	A	460	THR
1	A	466	LYS
1	A	485	ILE
1	A	496	ILE
1	A	523	VAL
1	A	550	CYS
1	A	556	ILE
1	A	564	LYS
1	A	565	ARG
1	A	566	ARG
1	A	619	THR
1	A	621	LYS
1	A	646	GLU
1	A	649	LYS
1	A	657	ASN
1	A	677	THR
1	A	687	MET
1	A	699	ARG
1	A	704	THR
1	A	706	ASP
1	A	707	SER
1	A	719	VAL
1	A	730	THR
1	A	731	ASP
1	A	740	GLN
1	A	751	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (11) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	28	GLN
1	A	64	HIS
1	A	112	ASN
1	A	447	GLN
1	A	484	ASN
1	A	491	GLN

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Mol	Chain	Res	Type
1	A	531	ASN
1	A	642	ASN
1	A	661	HIS
1	A	674	ASN
1	A	740	GLN

5.3.3 RNA [i](#)

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](#)

There are no ligands in this entry.

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	748/780 (95%)	1.19	170 (22%) 1 6	60, 177, 357, 550	0

All (170) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	81	GLY	10.5
1	A	398	SER	8.6
1	A	149	GLU	8.6
1	A	302	GLY	7.6
1	A	91	ASP	7.4
1	A	89	CYS	7.3
1	A	82	THR	7.0
1	A	201	ARG	6.7
1	A	200	GLN	6.6
1	A	80	GLY	6.3
1	A	362	MET	6.2
1	A	153	SER	6.2
1	A	150	ALA	6.1
1	A	365	LYS	6.1
1	A	198	SER	6.0
1	A	565	ARG	5.9
1	A	622	ARG	5.8
1	A	566	ARG	5.7
1	A	154	SER	5.7
1	A	28	GLN	5.6
1	A	147	ASP	5.5
1	A	397	LYS	5.4
1	A	196	ALA	5.3
1	A	199	HIS	5.0
1	A	152	LYS	5.0
1	A	245	ARG	4.8
1	A	148	GLU	4.7

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Mol	Chain	Res	Type	RSRZ
1	A	300	GLN	4.7
1	A	155	TYR	4.7
1	A	701	PHE	4.7
1	A	146	THR	4.7
1	A	441	GLU	4.6
1	A	367	PHE	4.6
1	A	653	ASP	4.5
1	A	621	LYS	4.4
1	A	232	GLU	4.4
1	A	173	ASP	4.4
1	A	396	SER	4.4
1	A	233	CYS	4.3
1	A	138	ASP	4.3
1	A	363	ASP	4.3
1	A	632	ASN	4.3
1	A	394	PRO	4.2
1	A	445	LYS	4.1
1	A	165	ILE	4.1
1	A	143	GLY	4.1
1	A	256	ARG	4.0
1	A	563	THR	4.0
1	A	703	ASN	4.0
1	A	156	LEU	4.0
1	A	170	CYS	4.0
1	A	301	ARG	3.9
1	A	654	SER	3.9
1	A	135	LEU	3.9
1	A	623	GLY	3.8
1	A	631	CYS	3.7
1	A	287	LEU	3.6
1	A	145	ILE	3.6
1	A	92	PHE	3.6
1	A	652	PHE	3.6
1	A	534	PRO	3.5
1	A	136	LEU	3.5
1	A	562	GLY	3.5
1	A	560	ALA	3.4
1	A	257	LEU	3.4
1	A	26	ASP	3.4
1	A	132	TRP	3.4
1	A	364	GLU	3.4
1	A	600	PHE	3.3

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Mol	Chain	Res	Type	RSRZ
1	A	616	MET	3.3
1	A	151	THR	3.3
1	A	333	ALA	3.3
1	A	87	ALA	3.3
1	A	432	ARG	3.3
1	A	370	ALA	3.3
1	A	234	PRO	3.3
1	A	252	THR	3.3
1	A	613	VAL	3.3
1	A	90	LYS	3.2
1	A	366	LYS	3.2
1	A	559	SER	3.2
1	A	172	THR	3.2
1	A	197	GLN	3.1
1	A	655	ARG	3.1
1	A	139	LEU	3.1
1	A	144	LYS	3.1
1	A	651	ILE	3.1
1	A	444	ALA	3.1
1	A	267	ILE	3.1
1	A	169	PHE	3.0
1	A	79	LEU	3.0
1	A	231	PRO	3.0
1	A	635	TYR	3.0
1	A	561	ALA	3.0
1	A	690	LYS	3.0
1	A	617	LYS	3.0
1	A	332	PRO	2.9
1	A	97	GLY	2.9
1	A	290	ASP	2.9
1	A	400	SER	2.9
1	A	577	CYS	2.9
1	A	202	THR	2.9
1	A	270	ASN	2.9
1	A	327	GLY	2.9
1	A	369	GLU	2.9
1	A	697	ASN	2.8
1	A	137	SER	2.8
1	A	514	GLN	2.8
1	A	361	ALA	2.8
1	A	358	VAL	2.7
1	A	249	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	258	ASN	2.7
1	A	564	LYS	2.7
1	A	567	VAL	2.7
1	A	167	ASN	2.7
1	A	171	GLY	2.7
1	A	447	GLN	2.6
1	A	164	SER	2.6
1	A	83	VAL	2.6
1	A	289	TYR	2.6
1	A	575	GLY	2.6
1	A	248	SER	2.6
1	A	78	GLN	2.6
1	A	345	ARG	2.6
1	A	411	PRO	2.6
1	A	595	ILE	2.5
1	A	576	TYR	2.5
1	A	88	ARG	2.5
1	A	85	GLY	2.5
1	A	650	GLY	2.5
1	A	329	PRO	2.5
1	A	371	LEU	2.5
1	A	730	THR	2.4
1	A	325	LEU	2.4
1	A	694	SER	2.4
1	A	647	GLU	2.4
1	A	698	GLY	2.4
1	A	341	ASN	2.4
1	A	594	TYR	2.3
1	A	568	PHE	2.3
1	A	56	GLN	2.3
1	A	303	GLY	2.3
1	A	399	GLY	2.3
1	A	368	ASP	2.3
1	A	292	ARG	2.3
1	A	628	ASN	2.3
1	A	203	PHE	2.2
1	A	100	ARG	2.2
1	A	268	ASP	2.2
1	A	359	THR	2.2
1	A	574	GLY	2.2
1	A	235	PRO	2.2
1	A	121	SER	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	515	PHE	2.1
1	A	59	VAL	2.1
1	A	395	VAL	2.1
1	A	328	THR	2.1
1	A	532	ASN	2.1
1	A	596	PHE	2.1
1	A	326	GLU	2.1
1	A	344	VAL	2.1
1	A	431	ASN	2.1
1	A	736	ILE	2.0
1	A	119	ASP	2.0
1	A	634	ASN	2.0
1	A	700	ILE	2.0
1	A	412	ALA	2.0
1	A	174	MET	2.0
1	A	293	VAL	2.0
1	A	702	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](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.