



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 02:40 AM UTC

PDB ID : 3CTB / pdb_00003ctb
Title : Tethered PXR-LBD/SRC-1p apoprotein
Authors : Lesburg, C.A.
Deposited on : 2008-04-11
Resolution : 2.00 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

<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
Xtrriage (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

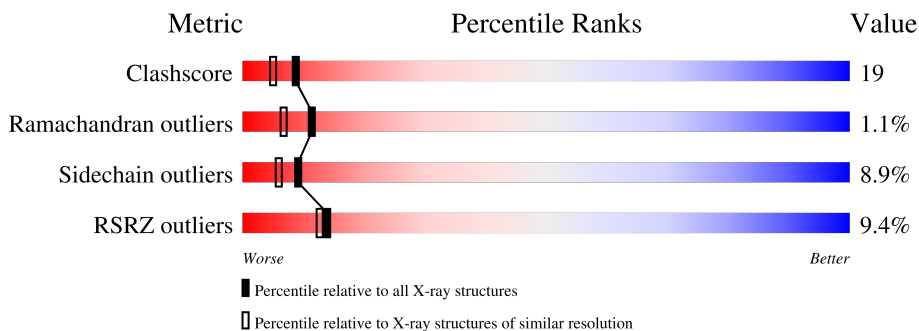
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.00 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))
Clashscore	190562	11152 (2.00-2.00)
Ramachandran outliers	187476	11031 (2.00-2.00)
Sidechain outliers	187428	11029 (2.00-2.00)
RSRZ outliers	180081	10067 (2.00-2.00)

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	344	 6% 54% 25% 5% 17%
1	B	344	 10% 56% 21% 5% 17%

2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 5078 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 Pregnane X receptor, Linker, Steroid receptor coactivator 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	287	2369	1520	410	420	19	0	2	0
1	B	287	2353	1510	406	418	19	0	1	0

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	119	MET	-	expression tag	UNP O75469
A	120	LYS	-	expression tag	UNP O75469
A	121	LYS	-	expression tag	UNP O75469
A	122	GLY	-	expression tag	UNP O75469
A	123	HIS	-	expression tag	UNP O75469
A	124	HIS	-	expression tag	UNP O75469
A	125	HIS	-	expression tag	UNP O75469
A	126	HIS	-	expression tag	UNP O75469
A	127	HIS	-	expression tag	UNP O75469
A	128	HIS	-	expression tag	UNP O75469
A	129	GLY	-	expression tag	UNP O75469
A	435	GLY	-	linker	UNP O75469
A	436	GLY	-	linker	UNP O75469
A	437	SER	-	linker	UNP O75469
A	438	GLY	-	linker	UNP O75469
A	439	GLY	-	linker	UNP O75469
B	119	MET	-	expression tag	UNP O75469
B	120	LYS	-	expression tag	UNP O75469
B	121	LYS	-	expression tag	UNP O75469
B	122	GLY	-	expression tag	UNP O75469
B	123	HIS	-	expression tag	UNP O75469
B	124	HIS	-	expression tag	UNP O75469
B	125	HIS	-	expression tag	UNP O75469
B	126	HIS	-	expression tag	UNP O75469
B	127	HIS	-	expression tag	UNP O75469

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Chain	Residue	Modelled	Actual	Comment	Reference
B	128	HIS	-	expression tag	UNP O75469
B	129	GLY	-	expression tag	UNP O75469
B	435	GLY	-	linker	UNP O75469
B	436	GLY	-	linker	UNP O75469
B	437	SER	-	linker	UNP O75469
B	438	GLY	-	linker	UNP O75469
B	439	GLY	-	linker	UNP O75469

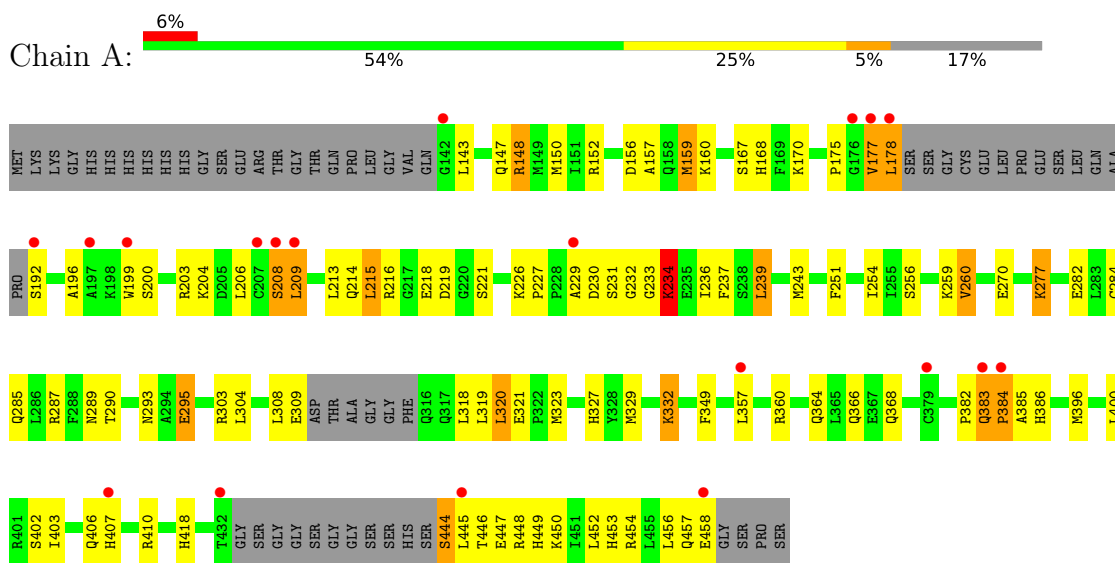
- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	184	Total	O	0	0
			184	184		
2	B	172	Total	O	0	0
			172	172		

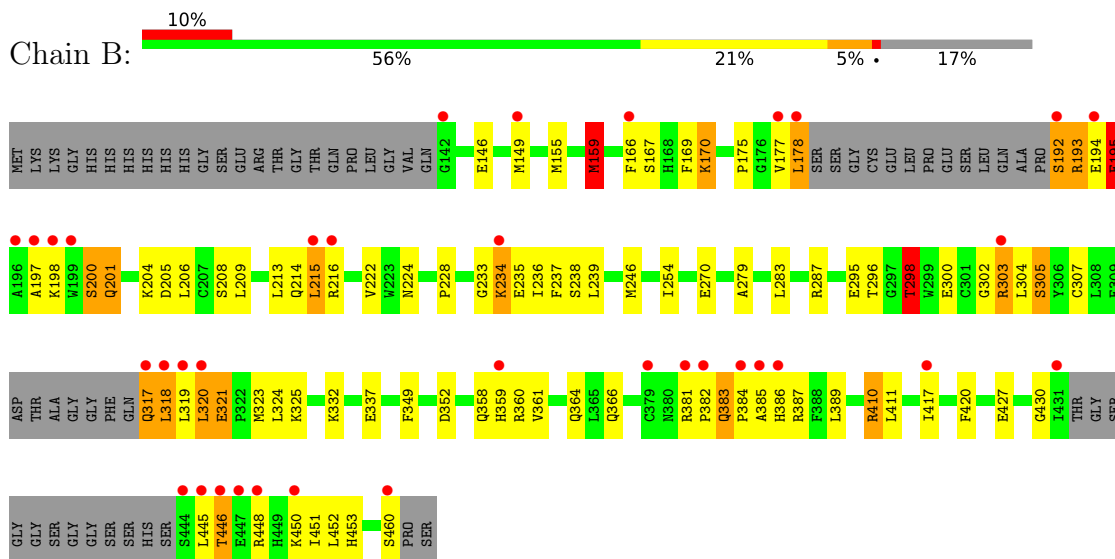
3 Residue-property plots i

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: Pregnane X receptor, Linker, Steroid receptor coactivator 1



- Molecule 1: Pregnane X receptor, Linker, Steroid receptor coactivator 1



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	85.24Å 89.24Å 105.23Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	45.31 – 2.00 45.31 – 2.00	Depositor EDS
% Data completeness (in resolution range)	98.5 (45.31-2.00) 96.3 (45.31-2.00)	Depositor EDS
R_{merge}	0.04	Depositor
R_{sym}	0.04	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.82 (at 2.00Å)	Xtrriage
Refinement program	BUSTER-TNT 1.3.1	Depositor
R, R_{free}	0.204 , 0.244 0.204 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å ²)	39.3	Xtrriage
Anisotropy	0.095	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 46.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.51$, $\langle L^2 \rangle = 0.35$	Xtrriage
Estimated twinning fraction	0.000 for k,h,-l	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	5078	wwPDB-VP
Average B, all atoms (Å ²)	52.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.74% 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	0.85	0/2419	0.95	2/3253 (0.1%)
1	B	0.86	1/2402 (0.0%)	0.99	11/3229 (0.3%)
All	All	0.86	1/4821 (0.0%)	0.97	13/6482 (0.2%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	159	MET	SD-CE	-17.67	1.35	1.79

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	318	LEU	N-CA-C	-7.60	103.01	111.82
1	B	195	GLU	N-CA-C	-7.09	105.16	113.88
1	A	159	MET	CG-SD-CE	-6.80	85.94	100.90
1	B	320	LEU	N-CA-C	-6.49	105.33	113.18
1	B	298	THR	N-CA-C	6.45	119.66	108.76
1	B	197	ALA	N-CA-C	-6.41	104.95	112.89
1	B	385	ALA	N-CA-C	-6.03	104.82	111.82
1	B	352	ASP	N-CA-C	5.86	119.41	112.72
1	B	238	SER	N-CA-C	5.62	117.41	111.28
1	A	234	LYS	N-CA-C	5.46	122.42	110.80
1	B	386	HIS	N-CA-C	5.18	118.91	112.59
1	B	383	GLN	N-CA-C	5.18	116.22	109.64
1	B	235	GLU	N-CA-C	-5.09	106.92	113.23

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	2369	0	2387	107	0
1	B	2353	0	2374	76	0
2	A	184	0	0	11	0
2	B	172	0	0	11	0
All	All	5078	0	4761	177	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 19.

All (177) 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:B:170:LYS:HD3	1:B:303:ARG:HH22	1.12	1.09
1:B:317:GLN:HG2	1:B:318:LEU:H	0.93	1.04
1:A:383:GLN:HB2	1:A:384:PRO:HD3	1.38	1.02
1:A:329:MET:HB3	1:A:396:MET:HE1	1.44	1.00
1:B:317:GLN:HG2	1:B:318:LEU:N	1.72	0.98
1:A:383:GLN:CB	1:A:384:PRO:HD3	2.01	0.89
1:A:218:GLU:HB2	1:B:178:LEU:HD23	1.58	0.85
1:A:329:MET:CB	1:A:396:MET:HE1	2.05	0.85
1:B:170:LYS:HD3	1:B:303:ARG:NH2	1.94	0.83
1:A:277:LYS:HD2	1:A:449:HIS:CE1	2.14	0.82
1:B:254:ILE:HD11	1:B:287:ARG:HD2	1.60	0.81
1:A:383:GLN:HB2	1:A:384:PRO:CD	2.11	0.81
1:B:317:GLN:CG	1:B:318:LEU:H	1.86	0.79
1:A:382:PRO:HD2	1:A:386:HIS:CD2	2.19	0.78
1:A:215:LEU:HD22	1:A:304:LEU:CD2	2.15	0.76
1:B:200:SER:O	1:B:204:LYS:HG3	1.84	0.76
1:A:206:LEU:HD12	1:A:236:ILE:HD12	1.68	0.76
1:A:383:GLN:O	1:A:385:ALA:N	2.21	0.73
1:B:361:VAL:HG23	2:B:540:HOH:O	1.88	0.73
1:A:383:GLN:CB	1:A:384:PRO:CD	2.66	0.73
1:A:218:GLU:HG2	1:A:303:ARG:NH2	2.05	0.72
1:B:224:ASN:HB2	2:B:628:HOH:O	1.90	0.71
1:B:445:LEU:HD21	2:B:567:HOH:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:218:GLU:HG2	1:A:303:ARG:CZ	2.23	0.69
1:A:233:GLY:O	1:A:236:ILE:HG12	1.93	0.68
1:A:150:MET:HE1	1:A:368:GLN:NE2	2.09	0.68
1:B:195:GLU:O	1:B:198:LYS:HG2	1.93	0.68
1:A:209:LEU:N	1:A:209:LEU:HD13	2.09	0.67
1:A:157:ALA:HB2	1:A:260:VAL:HG22	1.75	0.67
1:A:216:ARG:HH11	1:A:216:ARG:HG3	1.59	0.67
1:A:175:PRO:HG3	1:A:239:LEU:HD13	1.76	0.66
1:A:177:VAL:HA	2:A:618:HOH:O	1.94	0.66
1:A:454:ARG:O	1:A:458:GLU:HG2	1.97	0.64
1:A:215:LEU:HD22	1:A:304:LEU:HD21	1.80	0.64
1:B:213:LEU:HD21	1:B:215:LEU:HD12	1.80	0.63
1:A:382:PRO:HD2	1:A:386:HIS:HD2	1.64	0.63
1:B:166:PHE:HD2	1:B:169:PHE:CD2	2.16	0.63
1:A:157:ALA:HB2	1:A:260:VAL:CG2	2.30	0.62
1:A:270:GLU:OE2	1:A:446:THR:HG23	1.99	0.62
1:A:383:GLN:CG	1:A:384:PRO:HD3	2.31	0.61
1:B:296:THR:OG1	1:B:298:THR:HG23	2.00	0.61
1:A:254:ILE:HD11	1:A:287:ARG:HD2	1.83	0.60
1:B:460:SER:HB2	2:B:470:HOH:O	2.02	0.60
1:A:209:LEU:HG	1:A:323:MET:CE	2.31	0.59
1:A:382:PRO:O	1:A:383:GLN:O	2.21	0.59
1:A:157:ALA:CB	1:A:260:VAL:HG22	2.32	0.59
1:B:170:LYS:CD	1:B:303:ARG:HH22	2.01	0.59
1:B:300:GLU:HG2	2:B:627:HOH:O	2.02	0.59
1:A:208:SER:C	1:A:209:LEU:HD13	2.27	0.59
1:B:233:GLY:O	1:B:234:LYS:HB3	2.03	0.58
1:A:150:MET:HE1	1:A:368:GLN:HE21	1.69	0.58
1:A:445:LEU:O	1:A:449:HIS:HD2	1.87	0.58
1:B:159:MET:HE2	1:B:159:MET:C	2.30	0.57
1:A:215:LEU:CD2	1:A:304:LEU:HD21	2.35	0.56
1:A:289:ASN:HD22	1:A:327:HIS:HD1	1.51	0.56
1:B:317:GLN:CG	1:B:318:LEU:N	2.57	0.56
1:B:446:THR:HG23	2:B:600:HOH:O	2.04	0.56
1:A:156:ASP:CG	1:A:160:LYS:HE2	2.30	0.56
1:B:201:GLN:NE2	1:B:205:ASP:OD1	2.39	0.56
1:A:402:SER:O	1:A:406:GLN:HG3	2.07	0.55
1:A:178:LEU:N	1:A:178:LEU:HD23	2.22	0.55
1:A:209:LEU:HD21	1:A:410:ARG:NH1	2.21	0.55
1:A:447:GLU:O	1:A:450:LYS:HE2	2.07	0.55
1:B:270:GLU:HB3	1:B:445:LEU:HD12	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:175:PRO:CG	1:A:239:LEU:HD13	2.36	0.55
1:B:214:GLN:HE21	1:B:216:ARG:HH11	1.54	0.55
1:A:444:SER:O	1:A:448:ARG:HG3	2.06	0.55
1:B:159:MET:HE2	1:B:159:MET:O	2.07	0.55
1:A:216:ARG:HG3	1:A:216:ARG:NH1	2.23	0.54
1:A:332:LYS:HG2	2:A:616:HOH:O	2.07	0.54
1:A:368:GLN:HG3	2:A:603:HOH:O	2.07	0.54
1:A:214:GLN:HE21	1:A:216:ARG:HH11	1.54	0.54
1:A:206:LEU:CD1	1:A:236:ILE:HD12	2.38	0.53
1:A:206:LEU:HD11	1:A:237:PHE:CE2	2.44	0.53
1:B:234:LYS:HA	1:B:237:PHE:HD1	1.74	0.53
1:A:168:HIS:HD2	2:A:638:HOH:O	1.92	0.53
1:A:156:ASP:OD2	1:A:160:LYS:HE2	2.09	0.53
1:B:383:GLN:H	1:B:383:GLN:CD	2.16	0.53
1:A:148:ARG:HD3	2:A:640:HOH:O	2.08	0.52
1:A:209:LEU:HD11	1:A:321:GLU:HG2	1.91	0.52
1:A:157:ALA:HA	1:A:260:VAL:HG21	1.91	0.52
1:A:209:LEU:CD1	1:A:321:GLU:HG2	2.40	0.52
1:A:200:SER:O	1:A:204:LYS:HG3	2.09	0.51
1:B:215:LEU:HD12	1:B:304:LEU:HD23	1.92	0.51
1:A:177:VAL:HG12	1:B:215:LEU:CD2	2.41	0.51
1:A:293:ASN:OD1	1:A:295:GLU:HG2	2.11	0.51
1:B:360:ARG:O	1:B:364:GLN:HG2	2.11	0.51
1:B:411:LEU:CD1	1:B:420:PHE:CZ	2.93	0.51
1:A:156:ASP:OD1	1:A:160:LYS:HE2	2.12	0.50
1:A:219:ASP:H	1:B:178:LEU:HD22	1.76	0.50
1:A:234:LYS:HE2	1:A:237:PHE:HE1	1.76	0.50
1:B:213:LEU:HD21	1:B:215:LEU:CD1	2.41	0.50
1:A:177:VAL:HG12	1:B:215:LEU:HD21	1.94	0.49
1:B:166:PHE:HD2	1:B:169:PHE:HD2	1.60	0.49
1:A:157:ALA:CB	1:A:260:VAL:CG2	2.90	0.49
1:B:166:PHE:HE2	1:B:246:MET:HG2	1.76	0.49
1:B:234:LYS:HA	1:B:237:PHE:CD1	2.47	0.49
1:A:229:ALA:HB1	2:A:621:HOH:O	2.12	0.49
1:B:175:PRO:HG3	1:B:239:LEU:HD23	1.94	0.48
1:B:167:SER:O	1:B:170:LYS:HE2	2.13	0.48
1:A:251:PHE:CD2	1:A:284[A]:CYS:SG	3.07	0.48
1:B:382:PRO:HG2	1:B:383:GLN:NE2	2.28	0.48
1:B:206:LEU:HD12	1:B:236:ILE:HD12	1.95	0.48
1:B:319:LEU:HD22	1:B:325:LYS:HA	1.95	0.48
1:A:403:ILE:O	1:A:407[B]:HIS:HD2	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:155:MET:HE1	1:B:337:GLU:HB2	1.96	0.48
1:A:418:HIS:HE1	2:A:568:HOH:O	1.96	0.47
1:A:234:LYS:NZ	1:A:418:HIS:HD2	2.13	0.47
1:A:150:MET:CE	1:A:368:GLN:NE2	2.77	0.47
1:B:430:GLY:HA2	2:B:613:HOH:O	2.15	0.47
1:A:243:MET:HE3	2:A:637:HOH:O	2.14	0.47
1:B:201:GLN:HE21	1:B:205:ASP:CG	2.23	0.47
1:B:192:SER:O	1:B:193:ARG:O	2.33	0.47
1:A:148:ARG:HE	1:A:148:ARG:HB2	1.59	0.46
1:A:221:SER:HB3	1:B:228:PRO:HD3	1.97	0.46
1:A:290:THR:HG21	2:A:495:HOH:O	2.14	0.46
1:A:323:MET:HE2	1:A:407[B]:HIS:CE1	2.50	0.46
1:B:216:ARG:HG2	1:B:222:VAL:HG22	1.97	0.46
1:A:218:GLU:CG	1:A:303:ARG:NH1	2.79	0.46
1:A:453:HIS:O	1:A:457:GLN:HB2	2.16	0.46
1:B:254:ILE:CD1	1:B:287:ARG:HD2	2.38	0.46
1:A:329:MET:HB3	1:A:396:MET:CE	2.31	0.46
1:B:214:GLN:HB3	1:B:305:SER:HB2	1.98	0.45
1:A:209:LEU:HD22	1:A:209:LEU:H	1.80	0.45
1:A:213:LEU:C	1:A:213:LEU:HD23	2.42	0.45
1:B:209:LEU:HD21	1:B:321:GLU:HG3	1.98	0.45
1:A:178:LEU:N	1:A:178:LEU:CD2	2.80	0.45
1:B:453:HIS:HD2	2:B:543:HOH:O	1.99	0.45
1:A:323:MET:CE	1:A:407[B]:HIS:CE1	3.00	0.45
1:B:193:ARG:C	1:B:195:GLU:H	2.22	0.45
1:B:427:GLU:OE2	1:B:451:ILE:HG13	2.16	0.45
1:A:349:PHE:O	1:A:366:GLN:HB2	2.18	0.44
1:A:332:LYS:HD2	2:A:607:HOH:O	2.17	0.44
1:A:383:GLN:O	1:A:384:PRO:C	2.60	0.44
1:A:177:VAL:CG1	1:B:215:LEU:HD21	2.46	0.44
1:A:282:GLU:HG2	1:A:400:LEU:HG	1.99	0.44
1:B:358:GLN:HB3	1:B:361:VAL:CG2	2.48	0.44
1:B:169:PHE:C	1:B:170:LYS:HG2	2.43	0.44
1:B:359:HIS:HB2	2:B:591:HOH:O	2.17	0.44
1:B:169:PHE:O	1:B:303:ARG:NH2	2.48	0.44
1:A:259:LYS:HD2	1:A:456:LEU:HA	1.98	0.44
1:B:453:HIS:HE1	2:B:565:HOH:O	2.00	0.44
1:A:143:LEU:HD22	1:A:147:GLN:HB3	2.00	0.44
1:A:227:PRO:HG2	1:A:309:GLU:OE1	2.18	0.44
1:A:230:ASP:N	2:A:621:HOH:O	2.34	0.43
1:B:452:LEU:HA	1:B:452:LEU:HD23	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:192:SER:O	1:A:196:ALA:HB2	2.19	0.43
1:A:285:GLN:NE2	1:A:327:HIS:NE2	2.66	0.43
1:B:411:LEU:CD1	1:B:420:PHE:HZ	2.31	0.43
1:A:199:TRP:O	1:A:203:ARG:HG3	2.17	0.43
1:A:231:SER:HB3	1:A:232:GLY:H	1.57	0.43
1:B:384:PRO:HA	1:B:387:ARG:HG3	2.01	0.43
1:A:167:SER:O	1:A:170:LYS:HE3	2.18	0.42
1:B:321:GLU:OE1	1:B:410:ARG:NH2	2.39	0.42
1:B:166:PHE:CD2	1:B:169:PHE:CD2	3.03	0.42
1:B:215:LEU:HD12	1:B:304:LEU:CD2	2.48	0.42
1:B:296:THR:O	1:B:298:THR:HG22	2.20	0.42
1:A:256:SER:O	1:A:260:VAL:HG13	2.18	0.42
1:B:298:THR:HB	1:B:307:CYS:HA	2.01	0.42
1:A:383:GLN:CG	1:A:384:PRO:CD	2.96	0.42
1:B:146:GLU:HB2	2:B:598:HOH:O	2.20	0.41
1:A:277:LYS:HB3	1:A:277:LYS:HE3	1.52	0.41
1:A:209:LEU:HG	1:A:323:MET:HE3	2.03	0.41
1:B:216:ARG:HH11	1:B:216:ARG:HG3	1.85	0.41
1:A:323:MET:HE2	1:A:407[B]:HIS:HE1	1.85	0.41
1:A:234:LYS:HE2	1:A:237:PHE:CE1	2.55	0.41
1:A:318:LEU:C	1:A:320:LEU:N	2.77	0.41
1:A:383:GLN:CD	1:A:384:PRO:HD3	2.45	0.41
1:B:381:ARG:HD3	1:B:389:LEU:HD23	2.02	0.41
1:A:360:ARG:O	1:A:364:GLN:HG3	2.21	0.41
1:B:349:PHE:O	1:B:366:GLN:HB2	2.20	0.41
1:B:149:MET:HE3	1:B:149:MET:HB2	1.95	0.41
1:B:206:LEU:HD11	1:B:237:PHE:CE2	2.55	0.41
1:A:214:GLN:HE21	1:A:216:ARG:NH1	2.17	0.40
1:A:208:SER:HB2	1:A:209:LEU:HD13	2.04	0.40
1:B:279:ALA:HB1	1:B:283:LEU:HD13	2.04	0.40
1:A:215:LEU:HD22	1:A:304:LEU:HD23	1.95	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	281/344 (82%)	272 (97%)	6 (2%)	3 (1%)	11	7
1	B	280/344 (81%)	267 (95%)	10 (4%)	3 (1%)	11	7
All	All	561/688 (82%)	539 (96%)	16 (3%)	6 (1%)	11	7

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	383	GLN
1	A	384	PRO
1	B	193	ARG
1	A	234	LYS
1	B	302	GLY
1	B	234	LYS

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	Outliers	Percentiles	
1	A	262/302 (87%)	242 (92%)	20 (8%)	12	9
1	B	260/302 (86%)	234 (90%)	26 (10%)	7	4
All	All	522/604 (86%)	476 (91%)	46 (9%)	9	6

All (46) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	148	ARG
1	A	152	ARG
1	A	159	MET
1	A	177	VAL
1	A	178	LEU
1	A	208	SER
1	A	209	LEU

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Mol	Chain	Res	Type
1	A	215	LEU
1	A	226	LYS
1	A	239	LEU
1	A	260	VAL
1	A	277	LYS
1	A	295	GLU
1	A	308	LEU
1	A	319	LEU
1	A	320	LEU
1	A	332	LYS
1	A	357	LEU
1	A	444	SER
1	A	452	LEU
1	B	159	MET
1	B	170	LYS
1	B	177	VAL
1	B	178	LEU
1	B	192	SER
1	B	194	GLU
1	B	195	GLU
1	B	200	SER
1	B	201	GLN
1	B	208	SER
1	B	215	LEU
1	B	295	GLU
1	B	298	THR
1	B	303	ARG
1	B	305	SER
1	B	317	GLN
1	B	320	LEU
1	B	321	GLU
1	B	323	MET
1	B	324	LEU
1	B	332	LYS
1	B	410	ARG
1	B	417	ILE
1	B	446	THR
1	B	448	ARG
1	B	450	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (19) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	171	ASN
1	A	214	GLN
1	A	285	GLN
1	A	368	GLN
1	A	386	HIS
1	A	406	GLN
1	A	418	HIS
1	A	449	HIS
1	A	453	HIS
1	A	457	GLN
1	B	201	GLN
1	B	214	GLN
1	B	224	ASN
1	B	272	GLN
1	B	289	ASN
1	B	383	GLN
1	B	386	HIS
1	B	453	HIS
1	B	457	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 oligosaccharides 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

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, 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	287/344 (83%)	0.43	19 (6%) 24 23	16, 46, 81, 123	2 (0%)
1	B	287/344 (83%)	0.59	35 (12%) 8 7	16, 47, 87, 143	1 (0%)
All	All	574/688 (83%)	0.51	54 (9%) 14 13	16, 47, 85, 143	3 (0%)

All (54) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	178	LEU	6.0
1	A	178	LEU	5.9
1	B	385	ALA	4.7
1	A	177	VAL	4.3
1	B	384	PRO	4.2
1	B	142	GLY	3.9
1	A	209	LEU	3.9
1	B	317	GLN	3.9
1	B	379	CYS	3.8
1	B	320	LEU	3.6
1	B	199	TRP	3.3
1	B	460	SER	3.3
1	A	207	CYS	3.3
1	A	142	GLY	3.3
1	B	177	VAL	3.2
1	B	382	PRO	3.1
1	B	197	ALA	3.0
1	B	448	ARG	3.0
1	A	383	GLN	3.0
1	B	215	LEU	2.9
1	B	166	PHE	2.9
1	B	445	LEU	2.9
1	B	196	ALA	2.9
1	B	216	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
1	B	446	THR	2.8
1	A	176	GLY	2.7
1	A	379	CYS	2.7
1	B	303	ARG	2.7
1	A	208	SER	2.6
1	A	357	LEU	2.6
1	B	319	LEU	2.6
1	B	444	SER	2.6
1	B	318	LEU	2.6
1	A	384	PRO	2.5
1	A	407[A]	HIS	2.5
1	B	417	ILE	2.4
1	A	199	TRP	2.4
1	B	192	SER	2.4
1	B	386	HIS	2.4
1	A	445	LEU	2.3
1	A	432	THR	2.3
1	B	359	HIS	2.3
1	A	197	ALA	2.3
1	B	447	GLU	2.3
1	B	194	GLU	2.2
1	B	198	LYS	2.2
1	B	450	LYS	2.2
1	A	229	ALA	2.2
1	B	431	ILE	2.1
1	B	381	ARG	2.1
1	A	192	SER	2.1
1	B	149	MET	2.1
1	B	234	LYS	2.1
1	A	458	GLU	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](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.