



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 2, 2026 – 04:27 AM UTC

PDB ID : 5YTK / pdb_00005ytk
Title : Crystal structure of SIRT3 bound to a leucylated AceCS2
Authors : Li, J.; Gong, W.; Xu, Y.
Deposited on : 2017-11-18
Resolution : 2.70 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : **NOT EXECUTED**
Xtrriage (Phenix) : 2.0
EDS : **NOT EXECUTED**
Buster-report : **NOT EXECUTED**
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

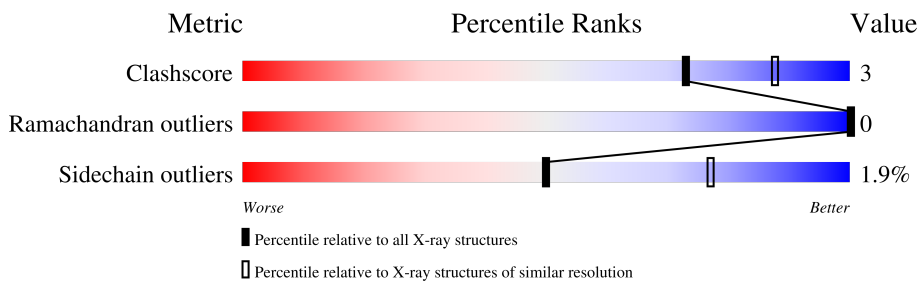
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 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	3843 (2.70-2.70)
Ramachandran outliers	187476	3778 (2.70-2.70)
Sidechain outliers	187428	3778 (2.70-2.70)



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 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 $\leq 5\%$

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	274	92% 8%
1	B	274	92% 8%
1	C	274	92% 8%
1	D	274	88% 11%
1	E	274	88% 12%
1	F	274	92% 7%
2	G	8	50% 25% 12% 12%
2	J	8	50% 12% 12% 25%

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Mol	Chain	Length	Quality of chain
2	K	8	 50% 38% 12%
2	L	8	 62% 38%

2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 13332 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 NAD-dependent protein deacetylase sirtuin-3, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	274	Total	C	N	O	S	0	1	0
			2159	1393	371	386	9			
1	B	274	Total	C	N	O	S	0	0	0
			2148	1384	370	385	9			
1	C	273	Total	C	N	O	S	0	0	0
			2144	1382	369	384	9			
1	D	274	Total	C	N	O	S	0	1	0
			2156	1388	372	387	9			
1	E	274	Total	C	N	O	S	0	2	0
			2165	1396	372	388	9			
1	F	274	Total	C	N	O	S	0	1	0
			2159	1390	374	386	9			

- Molecule 2 is a protein called AceCS2-KLeu.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	G	7	Total	C	N	O	S	0	0	0
			56	33	14	8	1			
2	J	6	Total	C	N	O	S	0	0	0
			45	27	10	7	1			
2	K	8	Total	C	N	O	S	0	0	0
			63	37	15	10	1			
2	L	8	Total	C	N	O	S	0	0	0
			63	37	15	10	1			

- Molecule 3 is ZINC ION (CCD ID: ZN) (formula: Zn).

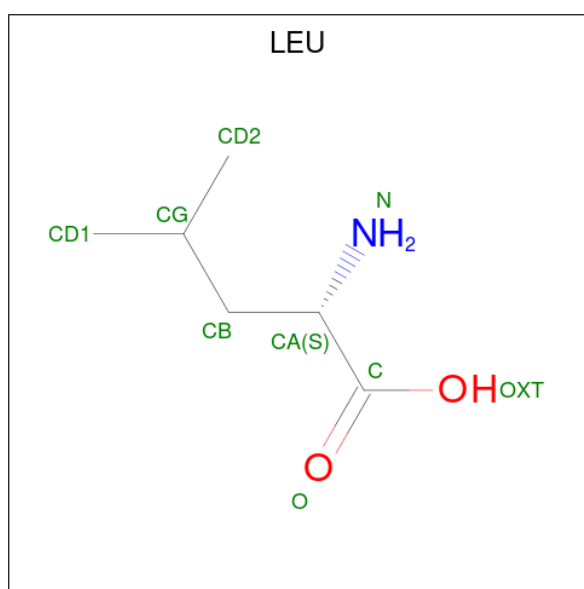
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	
3	A	1	Total	Zn	0	0
			1	1		
3	B	1	Total	Zn	0	0
			1	1		

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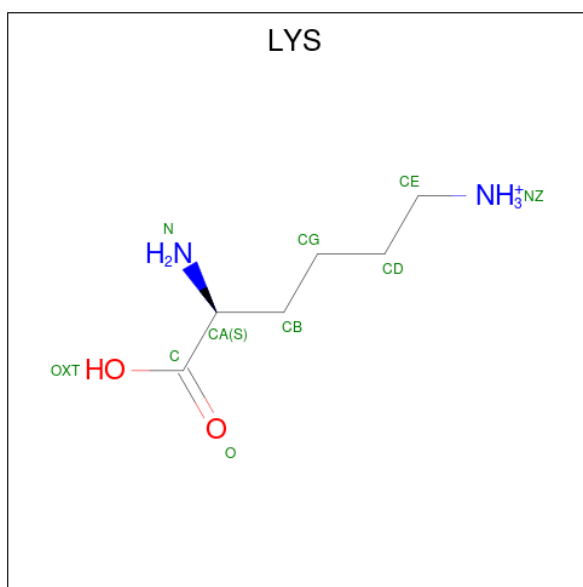
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	C	1	Total	Zn	0	0
			1	1		
3	D	1	Total	Zn	0	0
			1	1		
3	E	1	Total	Zn	0	0
			1	1		
3	F	1	Total	Zn	0	0
			1	1		

- Molecule 4 is LEUCINE (CCD ID: LEU) (formula: C₆H₁₃NO₂).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	B	1	Total	C	N	O	0	0
			8	6	1	1		
4	C	1	Total	C	N	O	0	0
			8	6	1	1		
4	G	1	Total	C	N	O	0	0
			8	6	1	1		
4	J	1	Total	C	N	O	0	0
			8	6	1	1		
4	K	1	Total	C	N	O	0	0
			8	6	1	1		
4	L	1	Total	C	N	O	0	0
			8	6	1	1		

- Molecule 5 is LYSINE (CCD ID: LYS) (formula: C₆H₁₅N₂O₂).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	B	1	Total	C	N	O	0	0
			9	6	2	1		
5	C	1	Total	C	N	O	0	0
			9	6	2	1		

- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	11	Total	O	0	0
			11	11		
6	B	26	Total	O	0	0
			26	26		
6	C	29	Total	O	0	0
			29	29		
6	D	11	Total	O	0	0
			11	11		
6	E	11	Total	O	0	0
			11	11		
6	F	14	Total	O	0	0
			14	14		

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. 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. 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.

Note EDS was not executed.

- Molecule 1: NAD-dependent protein deacetylase sirtuin-3, mitochondrial

Chain A:  92% 8%



- Molecule 1: NAD-dependent protein deacetylase sirtuin-3, mitochondrial

Chain B:  92% 8%




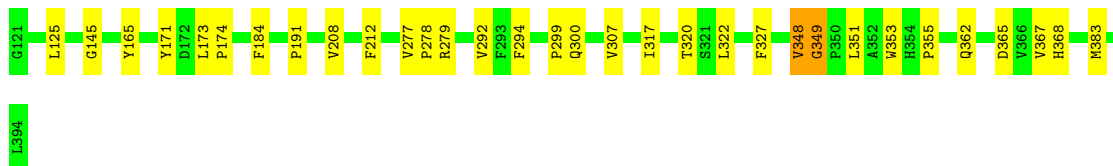
- Molecule 1: NAD-dependent protein deacetylase sirtuin-3, mitochondrial

Chain C:  92% 8%




- Molecule 1: NAD-dependent protein deacetylase sirtuin-3, mitochondrial

Chain D:  88% 11%



- Molecule 1: NAD-dependent protein deacetylase sirtuin-3, mitochondrial

Chain E:  88% 12%



K393
L394

- Molecule 1: NAD-dependent protein deacetylase sirtuin-3, mitochondrial

Chain F:  92% 7%

G191 G145 R158 Y171 E177 F180 P191 Y200 F212 L215 K219 L223 F294 M311 I317 T320 Y348 G349 P350 L351 A352 W353 R354 P355 M383 L394

- Molecule 2: AceCS2-KLeu

Chain G:  50% 25% 12% 12%

THR R639 S640 G641 K642 R645

- Molecule 2: AceCS2-KLeu

Chain J:  50% 12% 12% 25%

THR R639 S640 G641 K642 V643 M644 ARG

- Molecule 2: AceCS2-KLeu

Chain K:  50% 38% 12%

T638 R639 S640 G641 K642 V643 M644 R645

- Molecule 2: AceCS2-KLeu

Chain L:  62% 38%

T638 R639 S640 G641 K642 R645

4 Data and refinement statistics i

EDS was not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 32 2 1	Depositor
Cell constants a, b, c, α , β , γ	108.91Å 108.91Å 340.56Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	38.80 – 2.70	Depositor
% Data completeness (in resolution range)	100.0 (38.80-2.70)	Depositor
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.84 (at 2.69Å)	Xtrriage
Refinement program	PHENIX 1.9_1692	Depositor
R, R_{free}	0.201 , 0.237	Depositor
Wilson B-factor (Å ²)	49.6	Xtrriage
Anisotropy	0.148	Xtrriage
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	0.028 for -h,-k,l	Xtrriage
Total number of atoms	13332	wwPDB-VP
Average B, all atoms (Å ²)	56.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.22% 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](#)

Bond lengths and bond angles in the following residue types are not validated in this section:
ZN

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	0.40	0/2215	0.77	0/3017
1	B	0.43	0/2203	0.79	2/3001 (0.1%)
1	C	0.43	0/2199	0.79	2/2996 (0.1%)
1	D	0.40	0/2211	0.81	2/3012 (0.1%)
1	E	0.42	0/2221	0.77	0/3026
1	F	0.41	0/2214	0.79	0/3015
2	G	0.68	0/55	0.82	0/69
2	J	0.71	0/44	0.91	0/55
2	K	0.69	0/62	0.87	0/79
2	L	0.63	0/62	1.02	0/79
All	All	0.42	0/13486	0.79	6/18349 (0.0%)

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	200	TYR	CA-C-N	5.28	125.58	119.93
1	B	200	TYR	C-N-CA	5.28	125.58	119.93
1	C	349	GLY	CA-C-N	5.26	124.92	119.56
1	C	349	GLY	C-N-CA	5.26	124.92	119.56
1	D	349	GLY	CA-C-N	5.16	124.82	119.56
1	D	349	GLY	C-N-CA	5.16	124.82	119.56

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	2159	0	2171	15	0
1	B	2148	0	2163	14	0
1	C	2144	0	2160	11	1
1	D	2156	0	2168	19	0
1	E	2165	0	2176	18	1
1	F	2159	0	2175	12	0
2	G	56	0	62	1	0
2	J	45	0	49	1	0
2	K	63	0	69	4	0
2	L	63	0	69	1	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
4	B	8	0	10	4	0
4	C	8	0	10	1	0
4	G	8	0	10	0	0
4	J	8	0	10	0	0
4	K	8	0	10	1	0
4	L	8	0	10	0	0
5	B	9	0	10	0	0
5	C	9	0	10	1	0
6	A	11	0	0	1	0
6	B	26	0	0	1	0
6	C	29	0	0	0	0
6	D	11	0	0	0	0
6	E	11	0	0	0	0
6	F	14	0	0	0	0
All	All	13332	0	13342	86	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 3.

All (86) 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:352:ALA:O	1:D:165:TYR:OH	2.08	0.72
1:D:145:GLY:HA3	1:D:320:THR:HB	1.74	0.69
1:E:325:GLU:H	2:L:638:THR:N	1.95	0.64
1:A:135:ARG:NH1	6:A:501:HOH:O	2.31	0.63
1:E:389:ARG:HG2	1:E:393:LYS:HE3	1.81	0.63
1:F:317:ILE:HD13	1:F:351:LEU:HD11	1.82	0.61
1:B:145:GLY:HA3	1:B:320:THR:HB	1.83	0.61
1:C:212:PHE:HA	1:C:383:MET:HE1	1.80	0.60
1:A:145:GLY:HA3	1:A:320:THR:HB	1.84	0.59
1:A:322:LEU:HD22	1:A:327:PHE:HB3	1.84	0.58
1:E:212:PHE:HA	1:E:383:MET:HE1	1.86	0.58
1:F:145:GLY:HA3	1:F:320:THR:HB	1.86	0.58
1:C:209:THR:HG22	1:C:370:VAL:HG21	1.85	0.58
1:E:322:LEU:HD22	1:E:327:PHE:HB3	1.88	0.56
1:D:317:ILE:HD12	1:D:351:LEU:HD11	1.87	0.55
1:D:294:PHE:CD1	2:J:640:SER:HB2	2.43	0.53
1:B:348:VAL:HG12	1:B:349:GLY:H	1.74	0.53
1:E:208:VAL:HG11	1:E:367:VAL:HG13	1.91	0.53
1:D:212:PHE:HA	1:D:383:MET:HE1	1.91	0.53
1:B:212:PHE:HA	1:B:383:MET:HE1	1.90	0.53
1:A:171:TYR:CG	1:A:191:PRO:HG3	2.44	0.52
1:E:180:PHE:HB2	1:E:294:PHE:CE2	2.45	0.52
1:A:208:VAL:HG11	1:A:367:VAL:HG13	1.92	0.52
1:F:348:VAL:HG12	1:F:349:GLY:H	1.75	0.51
1:E:209:THR:HG22	1:E:370:VAL:HG21	1.92	0.51
1:E:292:VAL:HG12	2:K:642:LYS:HG2	1.92	0.51
1:E:294:PHE:CD1	2:K:640:SER:HB2	2.46	0.51
1:C:258:VAL:O	1:D:300:GLN:HB3	2.11	0.51
1:D:348:VAL:HG12	1:D:349:GLY:H	1.76	0.51
1:D:322:LEU:HD22	1:D:327:PHE:HB3	1.92	0.50
1:A:139:ARG:NH2	1:A:311:MET:O	2.44	0.49
1:E:145:GLY:HA3	1:E:320:THR:HB	1.94	0.49
1:B:322:LEU:HD22	1:B:327:PHE:HB3	1.94	0.49
1:E:348:VAL:HG12	1:E:349:GLY:H	1.77	0.49
1:B:197:LYS:NZ	6:B:504:HOH:O	2.42	0.49
1:B:171:TYR:CG	1:B:191:PRO:HG3	2.48	0.48
1:F:212:PHE:HA	1:F:383:MET:HE1	1.96	0.47
1:C:145:GLY:HA3	1:C:320:THR:HB	1.96	0.47
1:B:157:PHE:HE1	4:B:402:LEU:HD12	1.81	0.46
1:D:208:VAL:HG11	1:D:367:VAL:HG13	1.97	0.46
1:B:248:HIS:HD2	4:B:402:LEU:HD23	1.81	0.46
4:K:701:LEU:HD23	4:K:701:LEU:HA	1.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:353:TRP:HZ2	1:C:173:LEU:HB2	1.80	0.46
1:E:389:ARG:O	1:E:393:LYS:HG3	2.16	0.46
1:F:180:PHE:HB2	1:F:294:PHE:CE2	2.51	0.46
1:E:277:VAL:HA	1:E:278:PRO:HD3	1.85	0.45
1:A:348:VAL:HG12	1:A:349:GLY:H	1.81	0.45
1:A:150:THR:N	1:A:151:PRO:HD2	2.32	0.45
1:A:354:HIS:HE1	1:D:174:PRO:HA	1.81	0.44
1:C:322:LEU:HD13	1:C:331:THR:HG21	1.99	0.44
1:F:171:TYR:CG	1:F:191:PRO:HG3	2.52	0.44
1:A:354:HIS:NE2	1:D:173:LEU:O	2.51	0.44
1:C:292:VAL:HG12	5:C:403:LYS:HG2	2.00	0.44
1:F:158[B]:ARG:NH2	1:F:177:GLU:OE2	2.47	0.43
1:C:215:LEU:O	1:C:219:LYS:HG3	2.18	0.43
1:E:164:LEU:HD21	1:E:195:LEU:HD12	2.00	0.43
1:D:365:ASP:OD2	1:D:368:HIS:N	2.40	0.43
1:E:261:ARG:HA	1:E:262:PRO:HD3	1.85	0.43
1:F:223:LEU:HD21	1:F:311:MET:HE3	2.00	0.43
1:D:171:TYR:CG	1:D:191:PRO:HG3	2.54	0.43
1:D:184:PHE:HE1	1:D:191:PRO:HG2	1.84	0.43
1:B:381:GLU:HA	1:B:384:ARG:HG2	2.01	0.42
1:D:292:VAL:HG21	1:D:299:PRO:HD3	2.01	0.42
1:D:353:TRP:C	1:D:355:PRO:HD3	2.44	0.42
4:C:402:LEU:HD23	4:C:402:LEU:HA	1.78	0.42
1:E:179:ILE:HG23	1:E:192:PHE:HA	2.02	0.42
1:E:381:GLU:HA	1:E:384:ARG:HG2	2.02	0.42
1:A:292:VAL:HG21	1:A:299:PRO:HD3	2.01	0.42
1:D:277:VAL:HA	1:D:278:PRO:HD3	1.90	0.42
1:A:292:VAL:HG12	2:G:642:LYS:HD3	2.02	0.42
1:B:248:HIS:CD2	4:B:402:LEU:HA	2.55	0.41
1:A:277:VAL:HA	1:A:278:PRO:HD3	1.92	0.41
2:K:639:ARG:HA	2:K:639:ARG:HD3	1.89	0.41
1:B:292:VAL:HG21	1:B:299:PRO:HD3	2.02	0.41
1:F:223:LEU:HD11	1:F:311:MET:HE3	2.02	0.41
1:D:125:LEU:HD22	1:D:362:GLN:HE21	1.84	0.41
1:E:297:PRO:HA	2:K:643:VAL:O	2.21	0.41
1:D:279:ARG:HH12	1:F:311:MET:HE1	1.86	0.41
1:C:330:LEU:HD23	1:C:330:LEU:HA	1.93	0.40
1:C:353:TRP:C	1:C:355:PRO:HD3	2.47	0.40
1:F:215:LEU:O	1:F:219:LYS:HG3	2.22	0.40
1:A:279:ARG:HH12	1:B:311:MET:HE1	1.86	0.40
1:F:353:TRP:C	1:F:355:PRO:HD3	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:303:LEU:HD23	1:B:303:LEU:HA	1.91	0.40
4:B:402:LEU:HD23	4:B:402:LEU:HA	1.76	0.40
1:C:303:LEU:HD23	1:C:303:LEU:HA	1.89	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:C:130:GLU:OE2	1:E:337:SER:OG[4_645]	2.09	0.11

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	273/274 (100%)	266 (97%)	7 (3%)	0	100	100
1	B	272/274 (99%)	266 (98%)	6 (2%)	0	100	100
1	C	271/274 (99%)	265 (98%)	6 (2%)	0	100	100
1	D	273/274 (100%)	266 (97%)	7 (3%)	0	100	100
1	E	274/274 (100%)	267 (97%)	7 (3%)	0	100	100
1	F	273/274 (100%)	266 (97%)	7 (3%)	0	100	100
2	G	5/8 (62%)	5 (100%)	0	0	100	100
2	J	4/8 (50%)	4 (100%)	0	0	100	100
2	K	6/8 (75%)	6 (100%)	0	0	100	100
2	L	6/8 (75%)	6 (100%)	0	0	100	100
All	All	1657/1676 (99%)	1617 (98%)	40 (2%)	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	Outliers	Percentiles	
1	A	238/237 (100%)	237 (100%)	1 (0%)	84	93
1	B	237/237 (100%)	233 (98%)	4 (2%)	53	79
1	C	237/237 (100%)	235 (99%)	2 (1%)	73	88
1	D	238/237 (100%)	236 (99%)	2 (1%)	73	88
1	E	239/237 (101%)	235 (98%)	4 (2%)	53	79
1	F	238/237 (100%)	236 (99%)	2 (1%)	73	88
2	G	6/7 (86%)	3 (50%)	3 (50%)	0	0
2	J	5/7 (71%)	3 (60%)	2 (40%)	0	0
2	K	7/7 (100%)	6 (86%)	1 (14%)	3	8
2	L	7/7 (100%)	5 (71%)	2 (29%)	0	1
All	All	1452/1450 (100%)	1429 (98%)	23 (2%)	50	80

All (23) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	348	VAL
1	B	200	TYR
1	B	316	LEU
1	B	321	SER
1	B	348	VAL
1	C	307	VAL
1	C	316	LEU
1	D	307	VAL
1	D	348	VAL
1	E	200	TYR
1	E	235	ARG
1	E	307	VAL
1	E	348	VAL
1	F	200	TYR
1	F	348	VAL
2	G	639	ARG

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Mol	Chain	Res	Type
2	G	640	SER
2	G	642	LYS
2	J	640	SER
2	J	642	LYS
2	K	640	SER
2	L	640	SER
2	L	642	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	169	GLN
1	B	169	GLN
1	B	248	HIS
1	C	169	GLN
1	D	362	GLN
1	E	169	GLN
1	E	188	ASN
1	F	169	GLN
1	F	203	ASN
1	F	260	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](#)

Mogul was not executed - this section is therefore empty.

5.5 Carbohydrates [i](#)

Mogul was not executed - this section is therefore empty.

5.6 Ligand geometry [i](#)

Mogul was not executed - this section is therefore empty.

5.7 Other polymers [i](#)

Mogul was not executed - this section is therefore empty.

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](#)

EDS was not executed - this section is therefore empty.

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates [i](#)

EDS was not executed - this section is therefore empty.

6.4 Ligands [i](#)

EDS was not executed - this section is therefore empty.

6.5 Other polymers [i](#)

EDS was not executed - this section is therefore empty.