wwPDB X-ray Structure Validation Summary Report ⓘ

Jun 24, 2024 – 12:40 PM EDT

PDB ID	:	6GFC
Title	:	Structure of the BTB/POZ domain of human 90K
Authors	:	Ssebyatika, G.; Krey, T.
Deposited on	:	2018-04-29
Resolution	:	3.30 Å(reported)

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

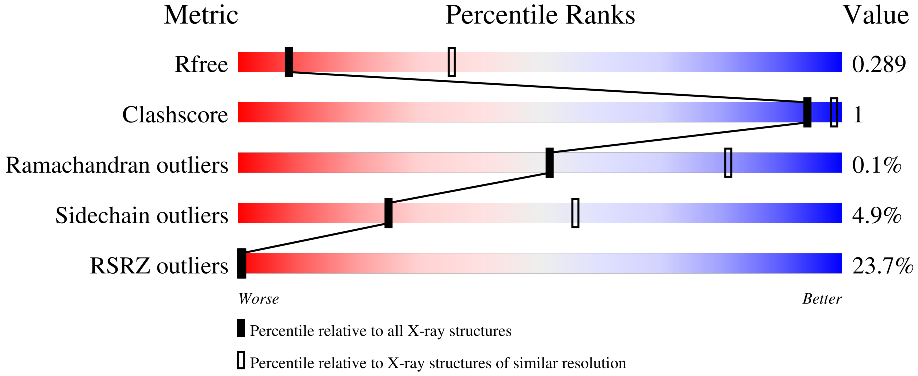
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance ⓘ

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

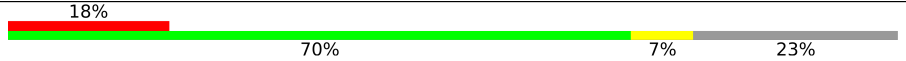
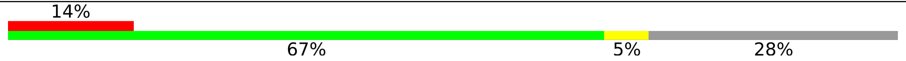
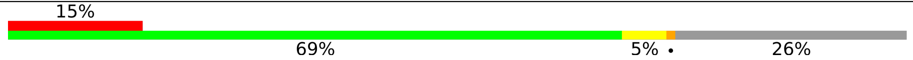
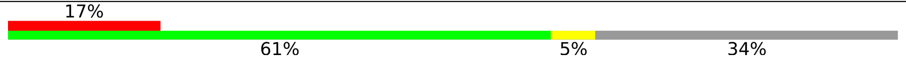
The reported resolution of this entry is 3.30 Å.

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.



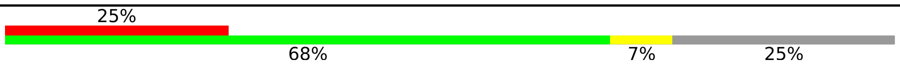
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1149 (3.34-3.26)
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	166	
1	B	166	
1	C	166	
1	D	166	
1	F	166	

Continued on next page...

Continued from previous page...

Mol	**Chain**	**Length**	**Quality of chain**
1	G	166	

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 5540 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 Galectin-3-binding protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	119	Total 909	C 574	N 151	O 177	S 7	0	0	0
1	B	128	Total 987	C 619	N 169	O 192	S 7	0	0	0
1	C	119	Total 909	C 574	N 151	O 177	S 7	0	0	0
1	D	123	Total 941	C 595	N 158	O 181	S 7	0	0	0
1	F	109	Total 847	C 537	N 143	O 160	S 7	0	0	0
1	G	124	Total 947	C 598	N 159	O 183	S 7	0	0	0

There are 234 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	122	ARG	-	expression tag	UNP H9FUB4
A	123	SER	-	expression tag	UNP H9FUB4
A	251	SER	-	expression tag	UNP H9FUB4
A	252	ARG	-	expression tag	UNP H9FUB4
A	253	ASP	-	expression tag	UNP H9FUB4
A	254	ASP	-	expression tag	UNP H9FUB4
A	255	ASP	-	expression tag	UNP H9FUB4
A	256	ASP	-	expression tag	UNP H9FUB4
A	257	LYS	-	expression tag	UNP H9FUB4
A	258	ALA	-	expression tag	UNP H9FUB4
A	259	GLY	-	expression tag	UNP H9FUB4
A	260	TRP	-	expression tag	UNP H9FUB4
A	261	SER	-	expression tag	UNP H9FUB4
A	262	HIS	-	expression tag	UNP H9FUB4
A	263	PRO	-	expression tag	UNP H9FUB4
A	264	GLN	-	expression tag	UNP H9FUB4
A	265	PHE	-	expression tag	UNP H9FUB4

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
A	266	GLU	-	expression tag	UNP H9FUB4
A	267	LYS	-	expression tag	UNP H9FUB4
A	268	GLY	-	expression tag	UNP H9FUB4
A	269	GLY	-	expression tag	UNP H9FUB4
A	270	GLY	-	expression tag	UNP H9FUB4
A	271	SER	-	expression tag	UNP H9FUB4
A	272	GLY	-	expression tag	UNP H9FUB4
A	273	GLY	-	expression tag	UNP H9FUB4
A	274	GLY	-	expression tag	UNP H9FUB4
A	275	SER	-	expression tag	UNP H9FUB4
A	276	GLY	-	expression tag	UNP H9FUB4
A	277	GLY	-	expression tag	UNP H9FUB4
A	278	GLY	-	expression tag	UNP H9FUB4
A	279	SER	-	expression tag	UNP H9FUB4
A	280	TRP	-	expression tag	UNP H9FUB4
A	281	SER	-	expression tag	UNP H9FUB4
A	282	HIS	-	expression tag	UNP H9FUB4
A	283	PRO	-	expression tag	UNP H9FUB4
A	284	GLN	-	expression tag	UNP H9FUB4
A	285	PHE	-	expression tag	UNP H9FUB4
A	286	GLU	-	expression tag	UNP H9FUB4
A	287	LYS	-	expression tag	UNP H9FUB4
B	122	ARG	-	expression tag	UNP H9FUB4
B	123	SER	-	expression tag	UNP H9FUB4
B	251	SER	-	expression tag	UNP H9FUB4
B	252	ARG	-	expression tag	UNP H9FUB4
B	253	ASP	-	expression tag	UNP H9FUB4
B	254	ASP	-	expression tag	UNP H9FUB4
B	255	ASP	-	expression tag	UNP H9FUB4
B	256	ASP	-	expression tag	UNP H9FUB4
B	257	LYS	-	expression tag	UNP H9FUB4
B	258	ALA	-	expression tag	UNP H9FUB4
B	259	GLY	-	expression tag	UNP H9FUB4
B	260	TRP	-	expression tag	UNP H9FUB4
B	261	SER	-	expression tag	UNP H9FUB4
B	262	HIS	-	expression tag	UNP H9FUB4
B	263	PRO	-	expression tag	UNP H9FUB4
B	264	GLN	-	expression tag	UNP H9FUB4
B	265	PHE	-	expression tag	UNP H9FUB4
B	266	GLU	-	expression tag	UNP H9FUB4
B	267	LYS	-	expression tag	UNP H9FUB4
B	268	GLY	-	expression tag	UNP H9FUB4

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
B	269	GLY	-	expression tag	UNP H9FUB4
B	270	GLY	-	expression tag	UNP H9FUB4
B	271	SER	-	expression tag	UNP H9FUB4
B	272	GLY	-	expression tag	UNP H9FUB4
B	273	GLY	-	expression tag	UNP H9FUB4
B	274	GLY	-	expression tag	UNP H9FUB4
B	275	SER	-	expression tag	UNP H9FUB4
B	276	GLY	-	expression tag	UNP H9FUB4
B	277	GLY	-	expression tag	UNP H9FUB4
B	278	GLY	-	expression tag	UNP H9FUB4
B	279	SER	-	expression tag	UNP H9FUB4
B	280	TRP	-	expression tag	UNP H9FUB4
B	281	SER	-	expression tag	UNP H9FUB4
B	282	HIS	-	expression tag	UNP H9FUB4
B	283	PRO	-	expression tag	UNP H9FUB4
B	284	GLN	-	expression tag	UNP H9FUB4
B	285	PHE	-	expression tag	UNP H9FUB4
B	286	GLU	-	expression tag	UNP H9FUB4
B	287	LYS	-	expression tag	UNP H9FUB4
C	122	ARG	-	expression tag	UNP H9FUB4
C	123	SER	-	expression tag	UNP H9FUB4
C	251	SER	-	expression tag	UNP H9FUB4
C	252	ARG	-	expression tag	UNP H9FUB4
C	253	ASP	-	expression tag	UNP H9FUB4
C	254	ASP	-	expression tag	UNP H9FUB4
C	255	ASP	-	expression tag	UNP H9FUB4
C	256	ASP	-	expression tag	UNP H9FUB4
C	257	LYS	-	expression tag	UNP H9FUB4
C	258	ALA	-	expression tag	UNP H9FUB4
C	259	GLY	-	expression tag	UNP H9FUB4
C	260	TRP	-	expression tag	UNP H9FUB4
C	261	SER	-	expression tag	UNP H9FUB4
C	262	HIS	-	expression tag	UNP H9FUB4
C	263	PRO	-	expression tag	UNP H9FUB4
C	264	GLN	-	expression tag	UNP H9FUB4
C	265	PHE	-	expression tag	UNP H9FUB4
C	266	GLU	-	expression tag	UNP H9FUB4
C	267	LYS	-	expression tag	UNP H9FUB4
C	268	GLY	-	expression tag	UNP H9FUB4
C	269	GLY	-	expression tag	UNP H9FUB4
C	270	GLY	-	expression tag	UNP H9FUB4
C	271	SER	-	expression tag	UNP H9FUB4

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
C	272	GLY	-	expression tag	UNP H9FUB4
C	273	GLY	-	expression tag	UNP H9FUB4
C	274	GLY	-	expression tag	UNP H9FUB4
C	275	SER	-	expression tag	UNP H9FUB4
C	276	GLY	-	expression tag	UNP H9FUB4
C	277	GLY	-	expression tag	UNP H9FUB4
C	278	GLY	-	expression tag	UNP H9FUB4
C	279	SER	-	expression tag	UNP H9FUB4
C	280	TRP	-	expression tag	UNP H9FUB4
C	281	SER	-	expression tag	UNP H9FUB4
C	282	HIS	-	expression tag	UNP H9FUB4
C	283	PRO	-	expression tag	UNP H9FUB4
C	284	GLN	-	expression tag	UNP H9FUB4
C	285	PHE	-	expression tag	UNP H9FUB4
C	286	GLU	-	expression tag	UNP H9FUB4
C	287	LYS	-	expression tag	UNP H9FUB4
D	122	ARG	-	expression tag	UNP H9FUB4
D	123	SER	-	expression tag	UNP H9FUB4
D	251	SER	-	expression tag	UNP H9FUB4
D	252	ARG	-	expression tag	UNP H9FUB4
D	253	ASP	-	expression tag	UNP H9FUB4
D	254	ASP	-	expression tag	UNP H9FUB4
D	255	ASP	-	expression tag	UNP H9FUB4
D	256	ASP	-	expression tag	UNP H9FUB4
D	257	LYS	-	expression tag	UNP H9FUB4
D	258	ALA	-	expression tag	UNP H9FUB4
D	259	GLY	-	expression tag	UNP H9FUB4
D	260	TRP	-	expression tag	UNP H9FUB4
D	261	SER	-	expression tag	UNP H9FUB4
D	262	HIS	-	expression tag	UNP H9FUB4
D	263	PRO	-	expression tag	UNP H9FUB4
D	264	GLN	-	expression tag	UNP H9FUB4
D	265	PHE	-	expression tag	UNP H9FUB4
D	266	GLU	-	expression tag	UNP H9FUB4
D	267	LYS	-	expression tag	UNP H9FUB4
D	268	GLY	-	expression tag	UNP H9FUB4
D	269	GLY	-	expression tag	UNP H9FUB4
D	270	GLY	-	expression tag	UNP H9FUB4
D	271	SER	-	expression tag	UNP H9FUB4
D	272	GLY	-	expression tag	UNP H9FUB4
D	273	GLY	-	expression tag	UNP H9FUB4
D	274	GLY	-	expression tag	UNP H9FUB4

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
D	275	SER	-	expression tag	UNP H9FUB4
D	276	GLY	-	expression tag	UNP H9FUB4
D	277	GLY	-	expression tag	UNP H9FUB4
D	278	GLY	-	expression tag	UNP H9FUB4
D	279	SER	-	expression tag	UNP H9FUB4
D	280	TRP	-	expression tag	UNP H9FUB4
D	281	SER	-	expression tag	UNP H9FUB4
D	282	HIS	-	expression tag	UNP H9FUB4
D	283	PRO	-	expression tag	UNP H9FUB4
D	284	GLN	-	expression tag	UNP H9FUB4
D	285	PHE	-	expression tag	UNP H9FUB4
D	286	GLU	-	expression tag	UNP H9FUB4
D	287	LYS	-	expression tag	UNP H9FUB4
F	122	ARG	-	expression tag	UNP H9FUB4
F	123	SER	-	expression tag	UNP H9FUB4
F	251	SER	-	expression tag	UNP H9FUB4
F	252	ARG	-	expression tag	UNP H9FUB4
F	253	ASP	-	expression tag	UNP H9FUB4
F	254	ASP	-	expression tag	UNP H9FUB4
F	255	ASP	-	expression tag	UNP H9FUB4
F	256	ASP	-	expression tag	UNP H9FUB4
F	257	LYS	-	expression tag	UNP H9FUB4
F	258	ALA	-	expression tag	UNP H9FUB4
F	259	GLY	-	expression tag	UNP H9FUB4
F	260	TRP	-	expression tag	UNP H9FUB4
F	261	SER	-	expression tag	UNP H9FUB4
F	262	HIS	-	expression tag	UNP H9FUB4
F	263	PRO	-	expression tag	UNP H9FUB4
F	264	GLN	-	expression tag	UNP H9FUB4
F	265	PHE	-	expression tag	UNP H9FUB4
F	266	GLU	-	expression tag	UNP H9FUB4
F	267	LYS	-	expression tag	UNP H9FUB4
F	268	GLY	-	expression tag	UNP H9FUB4
F	269	GLY	-	expression tag	UNP H9FUB4
F	270	GLY	-	expression tag	UNP H9FUB4
F	271	SER	-	expression tag	UNP H9FUB4
F	272	GLY	-	expression tag	UNP H9FUB4
F	273	GLY	-	expression tag	UNP H9FUB4
F	274	GLY	-	expression tag	UNP H9FUB4
F	275	SER	-	expression tag	UNP H9FUB4
F	276	GLY	-	expression tag	UNP H9FUB4
F	277	GLY	-	expression tag	UNP H9FUB4

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
F	278	GLY	-	expression tag	UNP H9FUB4
F	279	SER	-	expression tag	UNP H9FUB4
F	280	TRP	-	expression tag	UNP H9FUB4
F	281	SER	-	expression tag	UNP H9FUB4
F	282	HIS	-	expression tag	UNP H9FUB4
F	283	PRO	-	expression tag	UNP H9FUB4
F	284	GLN	-	expression tag	UNP H9FUB4
F	285	PHE	-	expression tag	UNP H9FUB4
F	286	GLU	-	expression tag	UNP H9FUB4
F	287	LYS	-	expression tag	UNP H9FUB4
G	122	ARG	-	expression tag	UNP H9FUB4
G	123	SER	-	expression tag	UNP H9FUB4
G	251	SER	-	expression tag	UNP H9FUB4
G	252	ARG	-	expression tag	UNP H9FUB4
G	253	ASP	-	expression tag	UNP H9FUB4
G	254	ASP	-	expression tag	UNP H9FUB4
G	255	ASP	-	expression tag	UNP H9FUB4
G	256	ASP	-	expression tag	UNP H9FUB4
G	257	LYS	-	expression tag	UNP H9FUB4
G	258	ALA	-	expression tag	UNP H9FUB4
G	259	GLY	-	expression tag	UNP H9FUB4
G	260	TRP	-	expression tag	UNP H9FUB4
G	261	SER	-	expression tag	UNP H9FUB4
G	262	HIS	-	expression tag	UNP H9FUB4
G	263	PRO	-	expression tag	UNP H9FUB4
G	264	GLN	-	expression tag	UNP H9FUB4
G	265	PHE	-	expression tag	UNP H9FUB4
G	266	GLU	-	expression tag	UNP H9FUB4
G	267	LYS	-	expression tag	UNP H9FUB4
G	268	GLY	-	expression tag	UNP H9FUB4
G	269	GLY	-	expression tag	UNP H9FUB4
G	270	GLY	-	expression tag	UNP H9FUB4
G	271	SER	-	expression tag	UNP H9FUB4
G	272	GLY	-	expression tag	UNP H9FUB4
G	273	GLY	-	expression tag	UNP H9FUB4
G	274	GLY	-	expression tag	UNP H9FUB4
G	275	SER	-	expression tag	UNP H9FUB4
G	276	GLY	-	expression tag	UNP H9FUB4
G	277	GLY	-	expression tag	UNP H9FUB4
G	278	GLY	-	expression tag	UNP H9FUB4
G	279	SER	-	expression tag	UNP H9FUB4
G	280	TRP	-	expression tag	UNP H9FUB4

Continued on next page...

Continued from previous page...

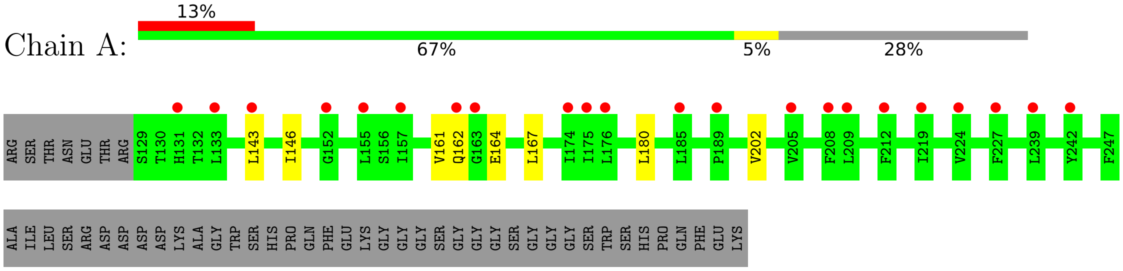
Chain	Residue	Modelled	Actual	Comment	Reference
G	281	SER	-	expression tag	UNP H9FUB4
G	282	HIS	-	expression tag	UNP H9FUB4
G	283	PRO	-	expression tag	UNP H9FUB4
G	284	GLN	-	expression tag	UNP H9FUB4
G	285	PHE	-	expression tag	UNP H9FUB4
G	286	GLU	-	expression tag	UNP H9FUB4
G	287	LYS	-	expression tag	UNP H9FUB4

3 Residue-property plots ⓘ

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.

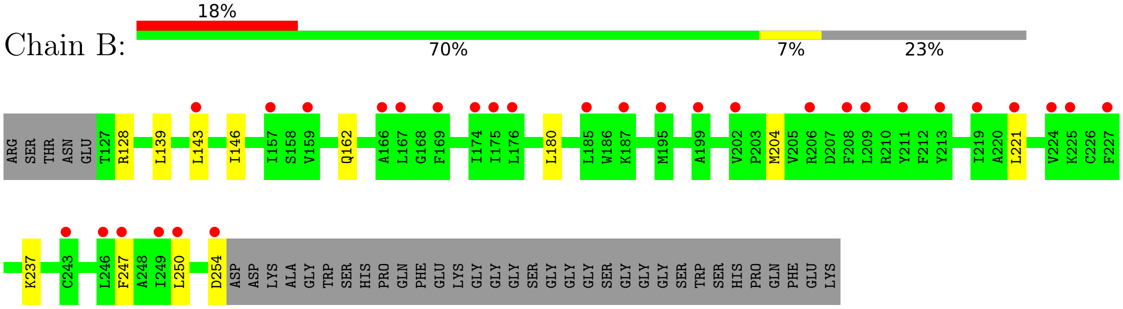
- Molecule 1: Galectin-3-binding protein

Chain A:



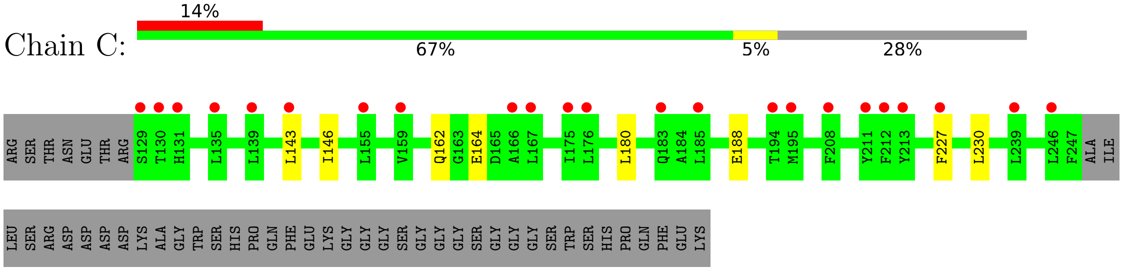
- Molecule 1: Galectin-3-binding protein

Chain B:



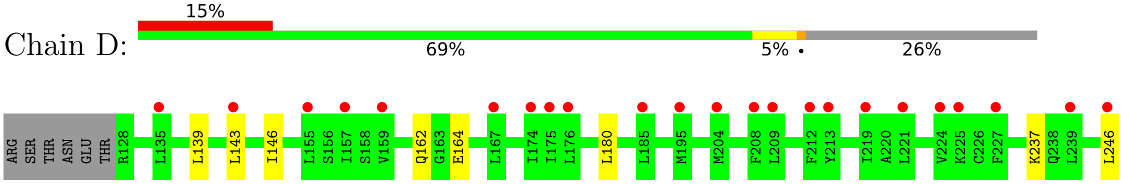
- Molecule 1: Galectin-3-binding protein

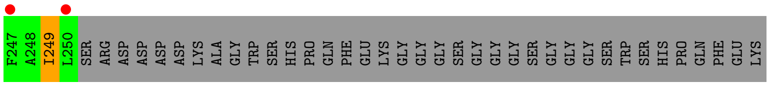
Chain C:



- Molecule 1: Galectin-3-binding protein

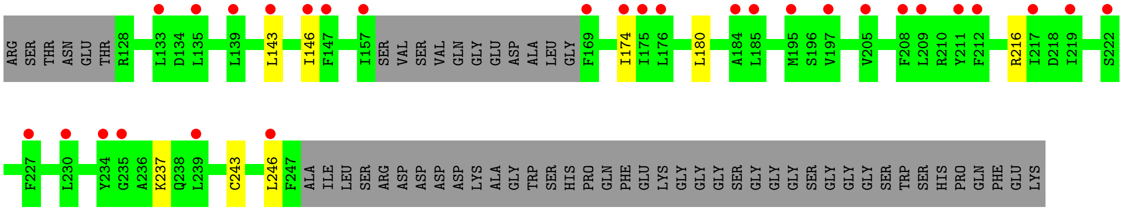
Chain D:





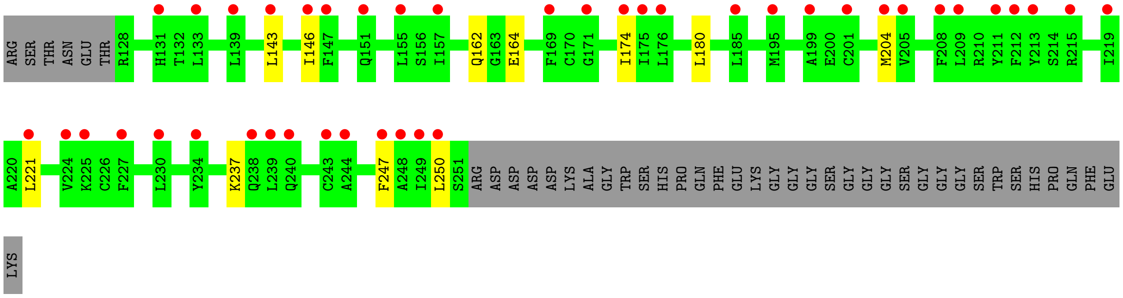
- Molecule 1: Galectin-3-binding protein

Chain F:



- Molecule 1: Galectin-3-binding protein

Chain G:



4 Data and refinement statistics ⓘ

Property	**Value**	**Source**
Space group	I 41 2 2	Depositor
Cell constants a, b, c, α, β, γ	181.74Å 181.74Å 173.29Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.30 128.51 – 3.30	Depositor EDS
% Data completeness (in resolution range)	100.0 (50.00-3.30) 100.0 (128.51-3.30)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.37 (at 3.33Å)	Xtriage
Refinement program	BUSTER 2.10.2	Depositor
R, R_{free}	0.267 , 0.287 0.281 , 0.289	Depositor DCC
R_{free} test set	1106 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	177.9	Xtriage
Anisotropy	0.124	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 89.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	0.010 for l,-k,h 0.035 for -h,-l,-k	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	5540	wwPDB-VP
Average B, all atoms (Å^2)	127.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.04% of the height of the origin peak. No significant pseudotranslation is detected.*

---

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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	0.37	0/925	0.56	0/1251
1	B	0.37	0/1003	0.58	0/1355
1	C	0.37	0/925	0.57	0/1251
1	D	0.36	0/957	0.57	0/1294
1	F	0.37	0/862	0.55	0/1163
1	G	0.36	0/963	0.56	0/1302
All	All	0.37	0/5635	0.56	0/7616

There are no bond length outliers.

There are no bond angle outliers.

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	909	0	882	3	0
1	B	987	0	966	3	0
1	C	909	0	882	3	0
1	D	941	0	922	2	0
1	F	847	0	826	3	0
1	G	947	0	927	3	0
All	All	5540	0	5405	14	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 1.

The worst 5 of 14 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:F:174:ILE:HD12	1:G:174:ILE:HD12	1.85	0.58
1:B:143:LEU:HA	1:B:146:ILE:HD12	1.90	0.54
1:F:143:LEU:HA	1:F:146:ILE:HD12	1.89	0.54
1:A:143:LEU:HA	1:A:146:ILE:HD12	1.90	0.54
1:D:143:LEU:HA	1:D:146:ILE:HD12	1.90	0.53

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	117/166 (70%)	112 (96%)	5 (4%)	0	100	100
1	B	126/166 (76%)	121 (96%)	5 (4%)	0	100	100
1	C	117/166 (70%)	113 (97%)	4 (3%)	0	100	100
1	D	121/166 (73%)	116 (96%)	4 (3%)	1 (1%)	19	51
1	F	105/166 (63%)	102 (97%)	3 (3%)	0	100	100
1	G	122/166 (74%)	118 (97%)	4 (3%)	0	100	100
All	All	708/996 (71%)	682 (96%)	25 (4%)	1 (0%)	51	81

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	249	ILE

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	100/136 (74%)	96 (96%)	4 (4%)	31	61
1	B	109/136 (80%)	102 (94%)	7 (6%)	17	46
1	C	100/136 (74%)	96 (96%)	4 (4%)	31	61
1	D	103/136 (76%)	97 (94%)	6 (6%)	20	50
1	F	93/136 (68%)	90 (97%)	3 (3%)	39	67
1	G	104/136 (76%)	98 (94%)	6 (6%)	20	50
All	All	609/816 (75%)	579 (95%)	30 (5%)	25	56

5 of 30 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	188	GLU
1	G	204	MET
1	D	180	LEU
1	G	247	PHE
1	G	162	GLN

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

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 monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

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

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	119/166 (71%)	1.13	22 (18%)	1	1	71, 96, 129, 149	0
1	B	128/166 (77%)	1.25	30 (23%)	0	1	82, 108, 137, 151	0
1	C	119/166 (71%)	1.12	23 (19%)	1	1	94, 128, 178, 192	0
1	D	123/166 (74%)	1.08	25 (20%)	1	1	87, 109, 141, 203	0
1	F	109/166 (65%)	1.22	29 (26%)	0	0	141, 165, 202, 219	0
1	G	124/166 (74%)	1.35	42 (33%)	0	0	132, 147, 182, 217	0
All	All	722/996 (72%)	1.19	171 (23%)	0	1	71, 123, 182, 219	0

The worst 5 of 171 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	129	SER	8.6
1	F	205	VAL	6.5
1	C	185	LEU	6.1
1	C	166	ALA	5.8
1	F	185	LEU	5.8

6.2 Non-standard residues in protein, DNA, RNA chains

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

6.3 Carbohydrates

There are no monosaccharides in this entry.

6.4 Ligands

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.