



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 29, 2026 – 11:31 PM UTC

PDB ID : 3VT1 / pdb_00003vt1
Title : Crystal structure of Ct1,3Gal43A in complex with galactose
Authors : Jiang, D.; Fan, J.; Wang, X.; Zhao, Y.; Huang, B.; Zhang, X.C.
Deposited on : 2012-05-18
Resolution : 3.19 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 : 2022.3.0, CSD as543be (2022)
Xtriage (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

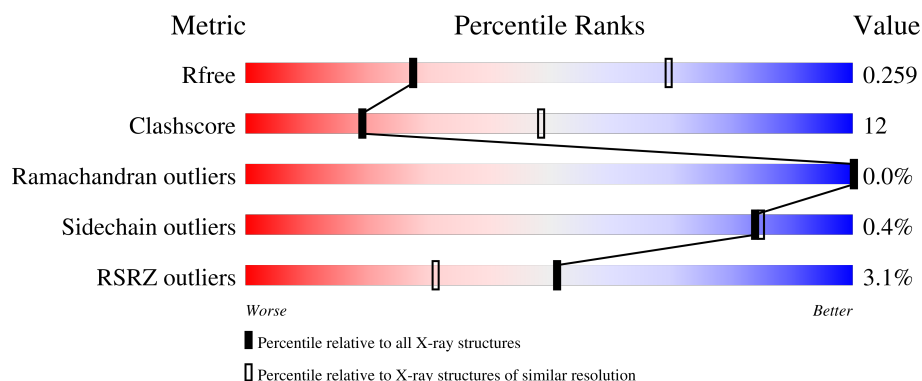
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.19 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}	180053	2001 (3.20-3.16)
Clashscore	190562	2119 (3.20-3.16)
Ramachandran outliers	187476	2070 (3.20-3.16)
Sidechain outliers	187428	2069 (3.20-3.16)
RSRZ outliers	180081	2001 (3.20-3.16)

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	526	2% 65% 23% 12%
1	B	526	2% 67% 21% 12%
1	C	526	0% 72% 19% 8%
1	D	526	10% 59% 28% 12%
1	E	526	0% 67% 21% 12%

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Mol	Chain	Length	Quality of chain
1	F	526	% 70% 17% 12%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 22211 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 Ricin B lectin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	461	Total	C	N	O	S	0	0	0
			3664	2323	623	703	15			
1	C	482	Total	C	N	O	S	0	0	0
			3807	2406	651	732	18			
1	D	461	Total	C	N	O	S	0	0	0
			3664	2323	623	703	15			
1	E	461	Total	C	N	O	S	0	0	0
			3664	2323	623	703	15			
1	F	461	Total	C	N	O	S	0	0	0
			3664	2323	623	703	15			
1	A	461	Total	C	N	O	S	0	0	0
			3664	2323	623	703	15			

There are 216 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-35	MET	-	expression tag	UNP A3DD67
B	-34	GLY	-	expression tag	UNP A3DD67
B	-33	SER	-	expression tag	UNP A3DD67
B	-32	SER	-	expression tag	UNP A3DD67
B	-31	HIS	-	expression tag	UNP A3DD67
B	-30	HIS	-	expression tag	UNP A3DD67
B	-29	HIS	-	expression tag	UNP A3DD67
B	-28	HIS	-	expression tag	UNP A3DD67
B	-27	HIS	-	expression tag	UNP A3DD67
B	-26	HIS	-	expression tag	UNP A3DD67
B	-25	SER	-	expression tag	UNP A3DD67
B	-24	SER	-	expression tag	UNP A3DD67
B	-23	GLY	-	expression tag	UNP A3DD67
B	-22	LEU	-	expression tag	UNP A3DD67
B	-21	VAL	-	expression tag	UNP A3DD67
B	-20	PRO	-	expression tag	UNP A3DD67
B	-19	ARG	-	expression tag	UNP A3DD67

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-18	GLY	-	expression tag	UNP A3DD67
B	-17	SER	-	expression tag	UNP A3DD67
B	-16	HIS	-	expression tag	UNP A3DD67
B	-15	MET	-	expression tag	UNP A3DD67
B	-14	ALA	-	expression tag	UNP A3DD67
B	-13	SER	-	expression tag	UNP A3DD67
B	-12	MET	-	expression tag	UNP A3DD67
B	-11	THR	-	expression tag	UNP A3DD67
B	-10	GLY	-	expression tag	UNP A3DD67
B	-9	GLY	-	expression tag	UNP A3DD67
B	-8	GLN	-	expression tag	UNP A3DD67
B	-7	GLN	-	expression tag	UNP A3DD67
B	-6	MET	-	expression tag	UNP A3DD67
B	-5	GLY	-	expression tag	UNP A3DD67
B	-4	ARG	-	expression tag	UNP A3DD67
B	-3	GLY	-	expression tag	UNP A3DD67
B	-2	SER	-	expression tag	UNP A3DD67
B	-1	GLU	-	expression tag	UNP A3DD67
B	0	PHE	-	expression tag	UNP A3DD67
C	-35	MET	-	expression tag	UNP A3DD67
C	-34	GLY	-	expression tag	UNP A3DD67
C	-33	SER	-	expression tag	UNP A3DD67
C	-32	SER	-	expression tag	UNP A3DD67
C	-31	HIS	-	expression tag	UNP A3DD67
C	-30	HIS	-	expression tag	UNP A3DD67
C	-29	HIS	-	expression tag	UNP A3DD67
C	-28	HIS	-	expression tag	UNP A3DD67
C	-27	HIS	-	expression tag	UNP A3DD67
C	-26	HIS	-	expression tag	UNP A3DD67
C	-25	SER	-	expression tag	UNP A3DD67
C	-24	SER	-	expression tag	UNP A3DD67
C	-23	GLY	-	expression tag	UNP A3DD67
C	-22	LEU	-	expression tag	UNP A3DD67
C	-21	VAL	-	expression tag	UNP A3DD67
C	-20	PRO	-	expression tag	UNP A3DD67
C	-19	ARG	-	expression tag	UNP A3DD67
C	-18	GLY	-	expression tag	UNP A3DD67
C	-17	SER	-	expression tag	UNP A3DD67
C	-16	HIS	-	expression tag	UNP A3DD67
C	-15	MET	-	expression tag	UNP A3DD67
C	-14	ALA	-	expression tag	UNP A3DD67
C	-13	SER	-	expression tag	UNP A3DD67

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Chain	Residue	Modelled	Actual	Comment	Reference
C	-12	MET	-	expression tag	UNP A3DD67
C	-11	THR	-	expression tag	UNP A3DD67
C	-10	GLY	-	expression tag	UNP A3DD67
C	-9	GLY	-	expression tag	UNP A3DD67
C	-8	GLN	-	expression tag	UNP A3DD67
C	-7	GLN	-	expression tag	UNP A3DD67
C	-6	MET	-	expression tag	UNP A3DD67
C	-5	GLY	-	expression tag	UNP A3DD67
C	-4	ARG	-	expression tag	UNP A3DD67
C	-3	GLY	-	expression tag	UNP A3DD67
C	-2	SER	-	expression tag	UNP A3DD67
C	-1	GLU	-	expression tag	UNP A3DD67
C	0	PHE	-	expression tag	UNP A3DD67
D	-35	MET	-	expression tag	UNP A3DD67
D	-34	GLY	-	expression tag	UNP A3DD67
D	-33	SER	-	expression tag	UNP A3DD67
D	-32	SER	-	expression tag	UNP A3DD67
D	-31	HIS	-	expression tag	UNP A3DD67
D	-30	HIS	-	expression tag	UNP A3DD67
D	-29	HIS	-	expression tag	UNP A3DD67
D	-28	HIS	-	expression tag	UNP A3DD67
D	-27	HIS	-	expression tag	UNP A3DD67
D	-26	HIS	-	expression tag	UNP A3DD67
D	-25	SER	-	expression tag	UNP A3DD67
D	-24	SER	-	expression tag	UNP A3DD67
D	-23	GLY	-	expression tag	UNP A3DD67
D	-22	LEU	-	expression tag	UNP A3DD67
D	-21	VAL	-	expression tag	UNP A3DD67
D	-20	PRO	-	expression tag	UNP A3DD67
D	-19	ARG	-	expression tag	UNP A3DD67
D	-18	GLY	-	expression tag	UNP A3DD67
D	-17	SER	-	expression tag	UNP A3DD67
D	-16	HIS	-	expression tag	UNP A3DD67
D	-15	MET	-	expression tag	UNP A3DD67
D	-14	ALA	-	expression tag	UNP A3DD67
D	-13	SER	-	expression tag	UNP A3DD67
D	-12	MET	-	expression tag	UNP A3DD67
D	-11	THR	-	expression tag	UNP A3DD67
D	-10	GLY	-	expression tag	UNP A3DD67
D	-9	GLY	-	expression tag	UNP A3DD67
D	-8	GLN	-	expression tag	UNP A3DD67
D	-7	GLN	-	expression tag	UNP A3DD67

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-6	MET	-	expression tag	UNP A3DD67
D	-5	GLY	-	expression tag	UNP A3DD67
D	-4	ARG	-	expression tag	UNP A3DD67
D	-3	GLY	-	expression tag	UNP A3DD67
D	-2	SER	-	expression tag	UNP A3DD67
D	-1	GLU	-	expression tag	UNP A3DD67
D	0	PHE	-	expression tag	UNP A3DD67
E	-35	MET	-	expression tag	UNP A3DD67
E	-34	GLY	-	expression tag	UNP A3DD67
E	-33	SER	-	expression tag	UNP A3DD67
E	-32	SER	-	expression tag	UNP A3DD67
E	-31	HIS	-	expression tag	UNP A3DD67
E	-30	HIS	-	expression tag	UNP A3DD67
E	-29	HIS	-	expression tag	UNP A3DD67
E	-28	HIS	-	expression tag	UNP A3DD67
E	-27	HIS	-	expression tag	UNP A3DD67
E	-26	HIS	-	expression tag	UNP A3DD67
E	-25	SER	-	expression tag	UNP A3DD67
E	-24	SER	-	expression tag	UNP A3DD67
E	-23	GLY	-	expression tag	UNP A3DD67
E	-22	LEU	-	expression tag	UNP A3DD67
E	-21	VAL	-	expression tag	UNP A3DD67
E	-20	PRO	-	expression tag	UNP A3DD67
E	-19	ARG	-	expression tag	UNP A3DD67
E	-18	GLY	-	expression tag	UNP A3DD67
E	-17	SER	-	expression tag	UNP A3DD67
E	-16	HIS	-	expression tag	UNP A3DD67
E	-15	MET	-	expression tag	UNP A3DD67
E	-14	ALA	-	expression tag	UNP A3DD67
E	-13	SER	-	expression tag	UNP A3DD67
E	-12	MET	-	expression tag	UNP A3DD67
E	-11	THR	-	expression tag	UNP A3DD67
E	-10	GLY	-	expression tag	UNP A3DD67
E	-9	GLY	-	expression tag	UNP A3DD67
E	-8	GLN	-	expression tag	UNP A3DD67
E	-7	GLN	-	expression tag	UNP A3DD67
E	-6	MET	-	expression tag	UNP A3DD67
E	-5	GLY	-	expression tag	UNP A3DD67
E	-4	ARG	-	expression tag	UNP A3DD67
E	-3	GLY	-	expression tag	UNP A3DD67
E	-2	SER	-	expression tag	UNP A3DD67
E	-1	GLU	-	expression tag	UNP A3DD67

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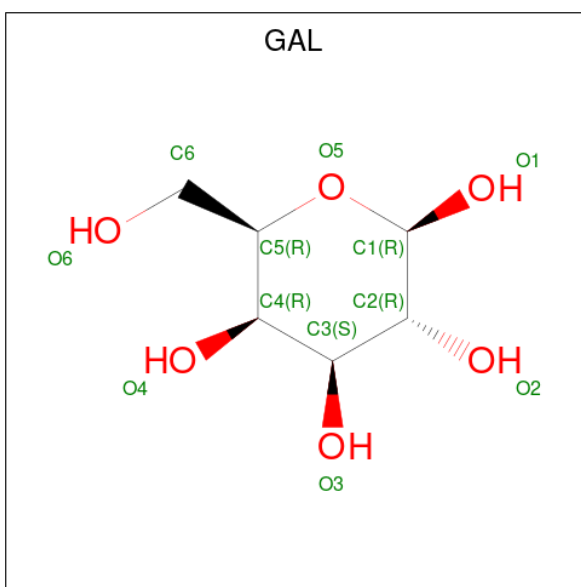
Chain	Residue	Modelled	Actual	Comment	Reference
E	0	PHE	-	expression tag	UNP A3DD67
F	-35	MET	-	expression tag	UNP A3DD67
F	-34	GLY	-	expression tag	UNP A3DD67
F	-33	SER	-	expression tag	UNP A3DD67
F	-32	SER	-	expression tag	UNP A3DD67
F	-31	HIS	-	expression tag	UNP A3DD67
F	-30	HIS	-	expression tag	UNP A3DD67
F	-29	HIS	-	expression tag	UNP A3DD67
F	-28	HIS	-	expression tag	UNP A3DD67
F	-27	HIS	-	expression tag	UNP A3DD67
F	-26	HIS	-	expression tag	UNP A3DD67
F	-25	SER	-	expression tag	UNP A3DD67
F	-24	SER	-	expression tag	UNP A3DD67
F	-23	GLY	-	expression tag	UNP A3DD67
F	-22	LEU	-	expression tag	UNP A3DD67
F	-21	VAL	-	expression tag	UNP A3DD67
F	-20	PRO	-	expression tag	UNP A3DD67
F	-19	ARG	-	expression tag	UNP A3DD67
F	-18	GLY	-	expression tag	UNP A3DD67
F	-17	SER	-	expression tag	UNP A3DD67
F	-16	HIS	-	expression tag	UNP A3DD67
F	-15	MET	-	expression tag	UNP A3DD67
F	-14	ALA	-	expression tag	UNP A3DD67
F	-13	SER	-	expression tag	UNP A3DD67
F	-12	MET	-	expression tag	UNP A3DD67
F	-11	THR	-	expression tag	UNP A3DD67
F	-10	GLY	-	expression tag	UNP A3DD67
F	-9	GLY	-	expression tag	UNP A3DD67
F	-8	GLN	-	expression tag	UNP A3DD67
F	-7	GLN	-	expression tag	UNP A3DD67
F	-6	MET	-	expression tag	UNP A3DD67
F	-5	GLY	-	expression tag	UNP A3DD67
F	-4	ARG	-	expression tag	UNP A3DD67
F	-3	GLY	-	expression tag	UNP A3DD67
F	-2	SER	-	expression tag	UNP A3DD67
F	-1	GLU	-	expression tag	UNP A3DD67
F	0	PHE	-	expression tag	UNP A3DD67
A	-35	MET	-	expression tag	UNP A3DD67
A	-34	GLY	-	expression tag	UNP A3DD67
A	-33	SER	-	expression tag	UNP A3DD67
A	-32	SER	-	expression tag	UNP A3DD67
A	-31	HIS	-	expression tag	UNP A3DD67

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-30	HIS	-	expression tag	UNP A3DD67
A	-29	HIS	-	expression tag	UNP A3DD67
A	-28	HIS	-	expression tag	UNP A3DD67
A	-27	HIS	-	expression tag	UNP A3DD67
A	-26	HIS	-	expression tag	UNP A3DD67
A	-25	SER	-	expression tag	UNP A3DD67
A	-24	SER	-	expression tag	UNP A3DD67
A	-23	GLY	-	expression tag	UNP A3DD67
A	-22	LEU	-	expression tag	UNP A3DD67
A	-21	VAL	-	expression tag	UNP A3DD67
A	-20	PRO	-	expression tag	UNP A3DD67
A	-19	ARG	-	expression tag	UNP A3DD67
A	-18	GLY	-	expression tag	UNP A3DD67
A	-17	SER	-	expression tag	UNP A3DD67
A	-16	HIS	-	expression tag	UNP A3DD67
A	-15	MET	-	expression tag	UNP A3DD67
A	-14	ALA	-	expression tag	UNP A3DD67
A	-13	SER	-	expression tag	UNP A3DD67
A	-12	MET	-	expression tag	UNP A3DD67
A	-11	THR	-	expression tag	UNP A3DD67
A	-10	GLY	-	expression tag	UNP A3DD67
A	-9	GLY	-	expression tag	UNP A3DD67
A	-8	GLN	-	expression tag	UNP A3DD67
A	-7	GLN	-	expression tag	UNP A3DD67
A	-6	MET	-	expression tag	UNP A3DD67
A	-5	GLY	-	expression tag	UNP A3DD67
A	-4	ARG	-	expression tag	UNP A3DD67
A	-3	GLY	-	expression tag	UNP A3DD67
A	-2	SER	-	expression tag	UNP A3DD67
A	-1	GLU	-	expression tag	UNP A3DD67
A	0	PHE	-	expression tag	UNP A3DD67

- Molecule 2 is beta-D-galactopyranose (CCD ID: GAL) (formula: C₆H₁₂O₆).

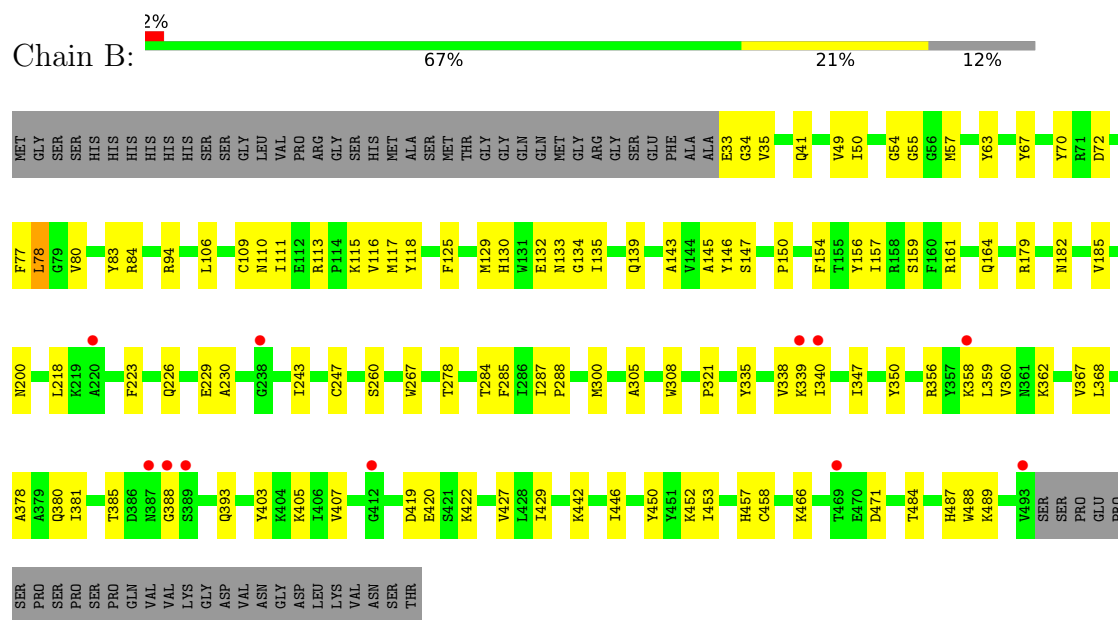


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	B	1	Total	C	O	0	0
			12	6	6		
2	C	1	Total	C	O	0	0
			12	6	6		
2	C	1	Total	C	O	0	0
			12	6	6		
2	E	1	Total	C	O	0	0
			12	6	6		
2	F	1	Total	C	O	0	0
			12	6	6		
2	F	1	Total	C	O	0	0
			12	6	6		
2	A	1	Total	C	O	0	0
			12	6	6		

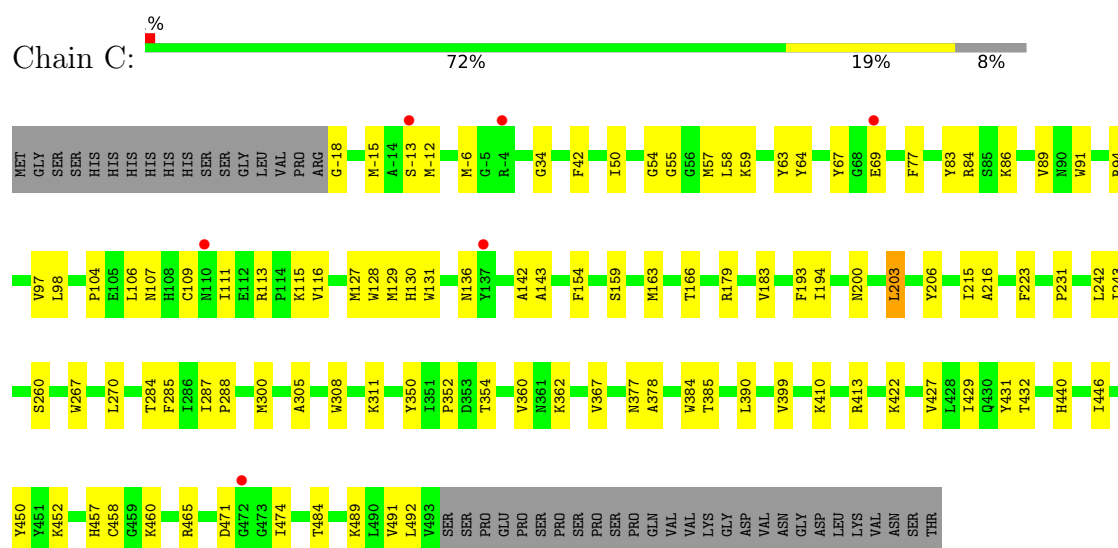
3 Residue-property plots [i](#)

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.

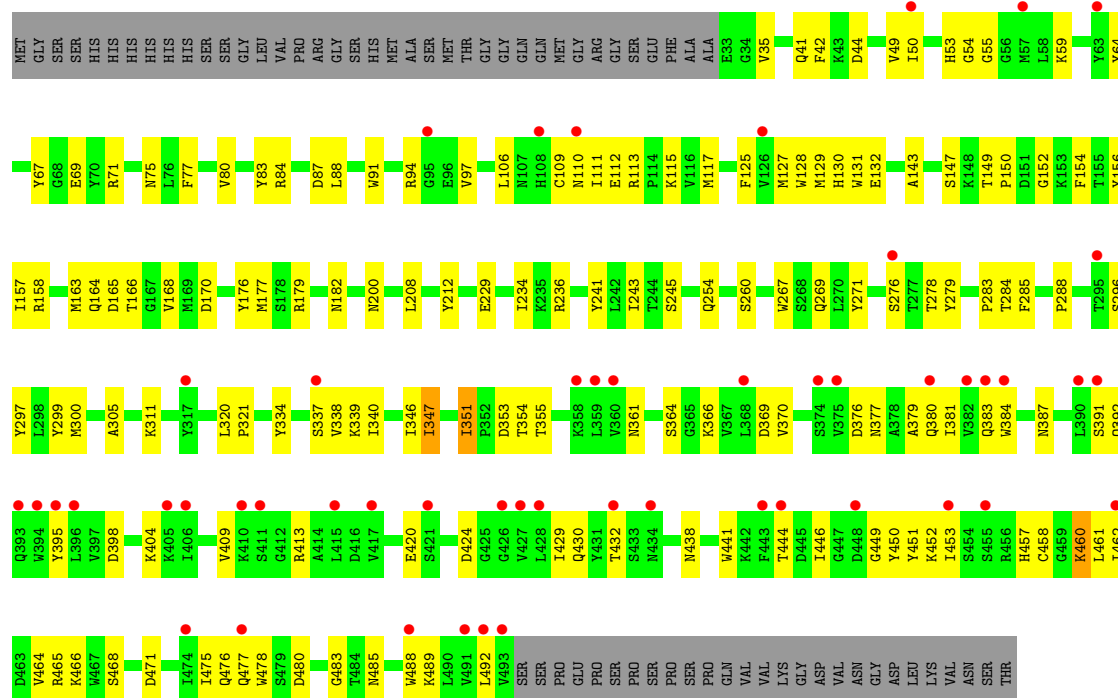
• Molecule 1: Ricin B lectin



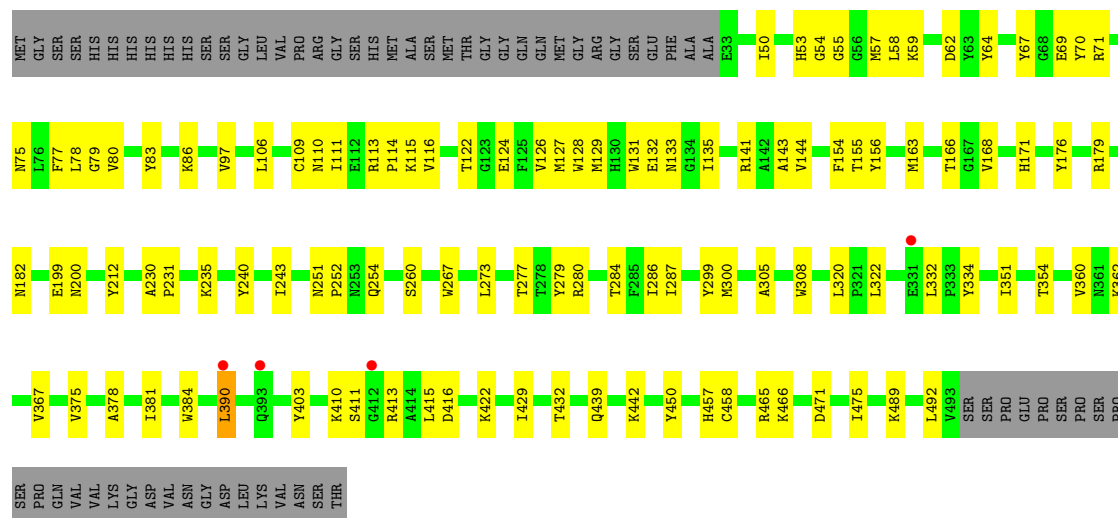
• Molecule 1: Ricin B lectin



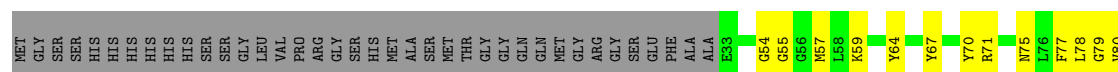
• Molecule 1: Ricin B lectin

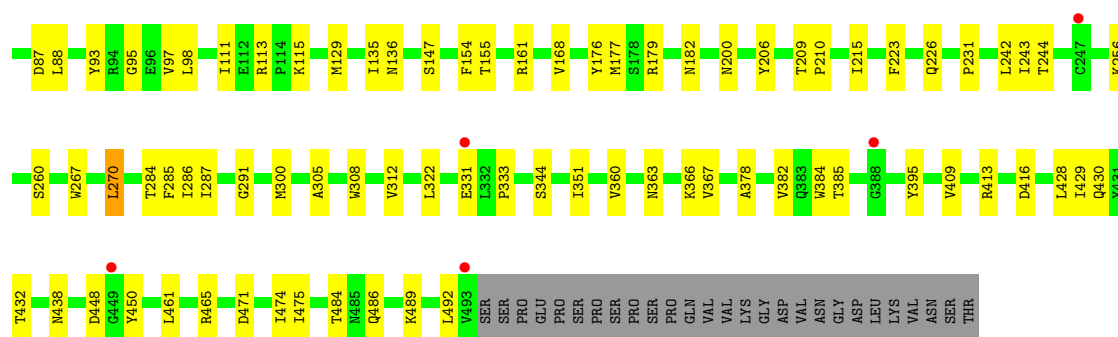


• Molecule 1: Ricin B lectin

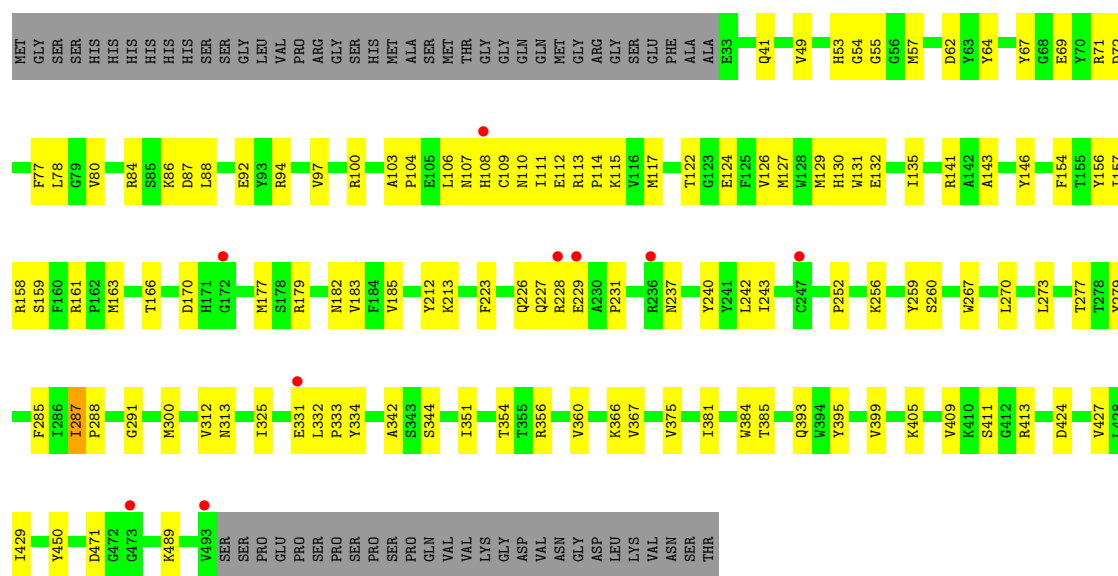


• Molecule 1: Ricin B lectin





● Molecule 1: Ricin B lectin



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	106.64Å 122.53Å 403.48Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.80 – 3.19 48.80 – 3.19	Depositor EDS
% Data completeness (in resolution range)	99.3 (48.80-3.19) 99.3 (48.80-3.19)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	4.49 (at 3.19Å)	Xtriage
Refinement program	PHENIX 1.7_650	Depositor
R, R_{free}	0.235 , 0.270 0.223 , 0.259	Depositor DCC
R_{free} test set	1593 reflections (1.80%)	wwPDB-VP
Wilson B-factor (Å ²)	72.6	Xtriage
Anisotropy	0.752	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 38.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	22211	wwPDB-VP
Average B, all atoms (Å ²)	84.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.20% 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: GAL

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	0.23	0/3762	0.69	1/5104 (0.0%)
1	B	0.24	0/3762	0.68	0/5104
1	C	0.24	0/3907	0.67	0/5295
1	D	0.26	0/3762	0.69	2/5104 (0.0%)
1	E	0.23	0/3762	0.69	0/5104
1	F	0.23	0/3762	0.68	0/5104
All	All	0.24	0/22717	0.68	3/30815 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	351	ILE	CA-C-N	5.66	125.33	119.56
1	D	351	ILE	C-N-CA	5.66	125.33	119.56
1	A	227	GLN	N-CA-C	5.08	116.85	110.91

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	3664	0	3480	91	0
1	B	3664	0	3480	85	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	C	3807	0	3613	81	0
1	D	3664	0	3480	117	0
1	E	3664	0	3480	77	0
1	F	3664	0	3480	67	0
2	A	12	0	12	0	0
2	B	12	0	12	1	0
2	C	24	0	24	2	0
2	E	12	0	12	0	0
2	F	24	0	24	0	0
All	All	22211	0	21097	508	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 12.

All (508) 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:D:383:GLN:HG3	1:D:475:ILE:HD11	1.34	1.06
1:A:229:GLU:O	1:A:231:PRO:HD3	1.69	0.93
1:D:387:ASN:H	1:D:392:GLN:HE22	1.13	0.92
1:C:57:MET:HE2	1:C:287:ILE:HG21	1.52	0.91
1:B:84:ARG:HE	1:B:94:ARG:HE	1.16	0.90
1:D:450:TYR:HA	1:D:489:LYS:HB2	1.54	0.90
1:D:380:GLN:HA	1:D:429:ILE:HG22	1.53	0.88
1:E:57:MET:HE2	1:E:287:ILE:HG21	1.58	0.83
1:C:-12:MET:HG3	1:E:155:THR:HG22	1.59	0.83
1:D:461:LEU:HD21	1:D:480:ASP:HB3	1.61	0.82
1:D:254:GLN:HG2	1:D:276:SER:HA	1.61	0.82
1:F:57:MET:HE2	1:F:287:ILE:HG21	1.61	0.81
1:D:340:ILE:HG22	1:D:347:ILE:HG22	1.62	0.81
1:D:321:PRO:HB3	1:D:347:ILE:HD13	1.62	0.81
1:C:42:PHE:CD2	1:C:50:ILE:HD12	2.16	0.81
1:C:42:PHE:HD2	1:C:50:ILE:HD12	1.47	0.80
1:F:461:LEU:HD11	1:F:486:GLN:HB3	1.63	0.79
1:D:449:GLY:C	1:D:489:LYS:HD2	2.05	0.79
1:C:34:GLY:HA2	1:C:89:VAL:HG21	1.65	0.78
1:F:360:VAL:HG22	1:F:367:VAL:HG12	1.67	0.76
1:B:356:ARG:HD3	1:B:393:GLN:NE2	2.00	0.75
1:B:133:ASN:HD22	1:B:139:GLN:HG2	1.52	0.74
1:C:260:SER:HB2	1:C:267:TRP:HA	1.69	0.74
1:A:366:LYS:HE2	1:A:385:THR:HG22	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:340:ILE:HG22	1:B:347:ILE:HG23	1.69	0.74
1:B:360:VAL:HG22	1:B:367:VAL:HG12	1.69	0.74
1:C:216:ALA:HA	1:D:164:GLN:HE22	1.52	0.74
1:E:422:LYS:HD3	1:E:458:CYS:HB3	1.70	0.74
1:D:420:GLU:HB3	1:D:457:HIS:CE1	2.25	0.72
1:D:465:ARG:HG2	1:D:466:LYS:HG3	1.69	0.72
1:D:130:HIS:CD2	1:D:179:ARG:HA	2.24	0.72
1:A:360:VAL:HG22	1:A:367:VAL:HG12	1.72	0.71
1:D:125:PHE:CZ	1:D:150:PRO:HG3	2.25	0.71
1:C:360:VAL:HG22	1:C:367:VAL:HG12	1.73	0.70
1:E:80:VAL:HG21	1:E:127:MET:HE1	1.75	0.69
1:C:-6:MET:CE	1:F:155:THR:HG21	2.23	0.69
1:E:416:ASP:HB3	1:E:439:GLN:HG2	1.74	0.69
1:E:381:ILE:HG22	1:E:475:ILE:HB	1.75	0.68
1:D:117:MET:HE3	1:D:212:TYR:HB3	1.73	0.68
1:E:390:LEU:O	1:E:410:LYS:HB2	1.93	0.68
1:E:111:ILE:HD11	1:E:131:TRP:HD1	1.58	0.68
1:B:146:TYR:HD2	1:B:157:ILE:HD11	1.59	0.68
1:B:146:TYR:CD2	1:B:157:ILE:HD11	2.30	0.67
1:E:252:PRO:HB2	1:E:277:THR:HG23	1.76	0.67
1:D:163:MET:HE3	1:D:166:THR:HG21	1.76	0.67
1:C:98:LEU:HD22	1:C:127:MET:HE1	1.77	0.66
1:D:69:GLU:OE1	1:D:112:GLU:HA	1.95	0.66
1:A:72:ASP:HB3	1:A:78:LEU:HD12	1.77	0.66
1:E:129:MET:HG2	1:E:143:ALA:HB3	1.78	0.66
1:E:171:HIS:CE1	1:E:199:GLU:HB2	2.31	0.66
1:A:88:LEU:HD13	1:A:342:ALA:HB2	1.78	0.66
1:D:53:HIS:O	1:D:69:GLU:HG2	1.96	0.66
1:E:360:VAL:HG22	1:E:367:VAL:HG12	1.77	0.65
1:F:111:ILE:HG12	1:F:129:MET:HE2	1.79	0.65
1:E:54:GLY:O	1:E:113:ARG:HA	1.97	0.65
1:D:395:TYR:CE2	1:D:409:VAL:HG22	2.32	0.65
1:F:71:ARG:HD3	1:F:312:VAL:HG11	1.78	0.65
1:D:71:ARG:HD3	1:D:75:ASN:OD1	1.97	0.65
1:B:179:ARG:HG3	1:B:200:ASN:OD1	1.96	0.65
1:D:381:ILE:HG22	1:D:475:ILE:HG13	1.79	0.65
1:A:110:ASN:HB2	1:A:132:GLU:HB2	1.78	0.65
1:B:133:ASN:OD1	1:B:135:ILE:HG13	1.97	0.64
1:A:260:SER:HB2	1:A:267:TRP:HA	1.79	0.64
1:F:285:PHE:HB3	1:F:300:MET:HE3	1.78	0.64
1:D:377:ASN:HD21	1:D:432:THR:HG23	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:422:LYS:HE3	1:C:457:HIS:CE1	2.31	0.64
1:F:98:LEU:HD23	1:F:129:MET:HE1	1.79	0.64
1:F:260:SER:HB2	1:F:267:TRP:HA	1.80	0.63
1:A:157:ILE:HG22	1:A:158:ARG:HG2	1.80	0.63
1:C:422:LYS:HG2	1:C:458:CYS:HB3	1.81	0.63
1:B:129:MET:HG2	1:B:143:ALA:HB3	1.80	0.63
1:B:484:THR:HA	1:B:487:HIS:CD2	2.34	0.63
1:B:57:MET:HE3	1:B:287:ILE:HG21	1.82	0.62
1:B:453:ILE:HD12	1:B:453:ILE:H	1.64	0.62
1:C:223:PHE:HE2	1:C:242:LEU:HD23	1.65	0.62
1:F:93:TYR:CZ	1:F:95:GLY:HA2	2.34	0.62
1:B:380:GLN:HE22	1:B:427:VAL:HG13	1.65	0.62
1:C:-18:GLY:HA3	1:C:-15:MET:HE2	1.80	0.62
1:D:260:SER:HB2	1:D:267:TRP:HA	1.81	0.62
1:E:77:PHE:CD1	1:E:111:ILE:HB	2.33	0.62
1:F:168:VAL:HG11	1:F:176:TYR:CE1	2.34	0.62
1:C:77:PHE:CD1	1:C:111:ILE:HB	2.35	0.61
1:F:448:ASP:HA	1:A:237:ASN:HD21	1.65	0.61
1:E:422:LYS:HE2	1:E:457:HIS:CD2	2.36	0.61
1:A:62:ASP:O	1:A:86:LYS:HG3	2.01	0.61
1:C:163:MET:HE3	1:C:166:THR:HG21	1.82	0.60
1:F:223:PHE:HE2	1:F:242:LEU:HD23	1.64	0.60
1:D:420:GLU:HB3	1:D:457:HIS:HE1	1.64	0.60
1:B:358:LYS:NZ	1:B:388:GLY:HA2	2.17	0.60
1:A:163:MET:HE3	1:A:166:THR:HG21	1.83	0.59
1:B:54:GLY:O	1:B:113:ARG:HA	2.02	0.59
1:C:84:ARG:HH21	1:C:94:ARG:NH1	2.00	0.59
1:C:450:TYR:CE1	1:C:489:LYS:HB2	2.36	0.59
1:B:161:ARG:O	1:B:164:GLN:HG3	2.02	0.59
1:E:179:ARG:HG3	1:E:200:ASN:OD1	2.03	0.59
1:C:50:ILE:HG23	1:C:83:TYR:CE1	2.37	0.59
1:A:228:ARG:NH2	1:A:256:LYS:HD2	2.18	0.59
1:A:287:ILE:HD11	1:A:300:MET:HE3	1.85	0.59
1:D:115:LYS:HZ1	1:D:284:THR:HG22	1.67	0.59
1:A:53:HIS:HE1	1:A:313:ASN:HA	1.68	0.59
1:A:375:VAL:HG12	1:A:411:SER:HB3	1.84	0.58
1:E:163:MET:HE3	1:E:166:THR:HG21	1.85	0.58
1:D:451:TYR:HB2	1:D:488:TRP:O	2.02	0.58
1:D:441:TRP:HZ3	1:D:477:GLN:HE22	1.50	0.58
1:F:223:PHE:HB3	1:F:226:GLN:HG3	1.86	0.58
1:A:100:ARG:HG2	1:A:107:ASN:HA	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:226:GLN:HE22	1:A:270:LEU:HD21	1.68	0.58
1:A:331:GLU:HG2	1:A:333:PRO:HD3	1.85	0.58
1:C:413:ARG:NH1	1:C:432:THR:HG22	2.18	0.58
1:F:77:PHE:CD1	1:F:111:ILE:HB	2.39	0.58
1:D:347:ILE:HD12	1:D:347:ILE:O	2.03	0.58
1:A:325:ILE:HD11	1:A:331:GLU:OE2	2.04	0.58
1:E:416:ASP:CB	1:E:439:GLN:HG2	2.33	0.57
1:A:285:PHE:CE2	1:A:287:ILE:HG23	2.40	0.57
1:C:413:ARG:HH12	1:C:432:THR:HG22	1.69	0.57
1:A:77:PHE:CD1	1:A:111:ILE:HB	2.40	0.57
1:B:145:ALA:HA	1:B:157:ILE:CD1	2.35	0.57
1:F:54:GLY:O	1:F:113:ARG:HA	2.03	0.57
1:D:117:MET:HE1	1:D:208:LEU:CD1	2.35	0.57
1:C:129:MET:HG2	1:C:143:ALA:HB3	1.87	0.56
1:B:67:TYR:CE2	1:B:116:VAL:HG21	2.40	0.56
1:D:245:SER:HB3	1:D:283:PRO:HD2	1.86	0.56
1:D:115:LYS:NZ	1:D:284:THR:HG22	2.21	0.56
1:E:53:HIS:O	1:E:69:GLU:HG2	2.04	0.56
1:B:77:PHE:HE1	1:B:80:VAL:HG23	1.71	0.56
1:D:77:PHE:CD1	1:D:111:ILE:HB	2.41	0.55
1:D:383:GLN:HE21	1:D:475:ILE:HD12	1.71	0.55
1:F:231:PRO:HA	1:F:244:THR:HG22	1.89	0.55
1:B:339:LYS:HB2	1:B:350:TYR:HB2	1.87	0.55
1:B:385:THR:HG23	1:B:471:ASP:OD1	2.06	0.55
1:D:157:ILE:HG22	1:D:158:ARG:HG2	1.88	0.55
1:F:223:PHE:CE2	1:F:242:LEU:HD23	2.41	0.55
1:B:55:GLY:HA3	1:B:67:TYR:O	2.07	0.55
1:B:362:LYS:HG3	1:B:484:THR:HB	1.88	0.55
1:D:97:VAL:HB	1:D:154:PHE:CD2	2.42	0.55
1:D:164:GLN:NE2	1:D:165:ASP:HB3	2.22	0.55
1:E:131:TRP:CE3	1:E:141:ARG:HD2	2.42	0.55
1:B:453:ILE:HD12	1:B:453:ILE:N	2.21	0.55
1:A:103:ALA:HB3	1:A:106:LEU:HG	1.89	0.55
1:C:384:TRP:CD1	2:C:602:GAL:HO3	2.24	0.55
1:A:55:GLY:HA3	1:A:67:TYR:O	2.07	0.55
1:E:168:VAL:HG11	1:E:176:TYR:CE1	2.41	0.55
1:F:366:LYS:HE3	1:F:385:THR:HG22	1.89	0.55
1:D:384:TRP:CE3	1:D:471:ASP:HB3	2.42	0.55
1:A:100:ARG:HG3	1:A:106:LEU:O	2.06	0.54
1:D:424:ASP:OD2	1:D:460:LYS:HD2	2.07	0.54
1:F:305:ALA:HA	1:F:308:TRP:CZ2	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:260:SER:HB2	1:E:267:TRP:HA	1.90	0.54
1:F:428:LEU:HD12	1:F:475:ILE:HG22	1.90	0.54
1:C:55:GLY:HA3	1:C:67:TYR:O	2.07	0.54
1:C:458:CYS:SG	1:C:460:LYS:HG3	2.47	0.54
1:A:84:ARG:HD2	1:A:94:ARG:HD3	1.89	0.54
1:B:260:SER:HB2	1:B:267:TRP:HA	1.90	0.54
1:F:384:TRP:CE3	1:F:471:ASP:HB3	2.43	0.54
1:A:84:ARG:HG2	1:A:92:GLU:HB3	1.89	0.54
1:A:129:MET:HG2	1:A:143:ALA:HB3	1.88	0.54
1:C:54:GLY:O	1:C:113:ARG:HA	2.08	0.53
1:F:135:ILE:HG22	1:F:136:ASN:HD22	1.73	0.53
1:F:450:TYR:CE1	1:F:489:LYS:HB2	2.43	0.53
1:C:362:LYS:HE3	1:C:484:THR:HG22	1.91	0.53
1:D:376:ASP:C	1:D:413:ARG:HH12	2.16	0.53
1:C:-6:MET:HE2	1:F:155:THR:HG21	1.90	0.53
1:C:84:ARG:HE	1:C:94:ARG:NE	2.05	0.53
1:D:55:GLY:HA3	1:D:67:TYR:O	2.08	0.53
1:C:465:ARG:HH21	1:C:474:ILE:HG21	1.74	0.53
1:D:453:ILE:HG21	1:D:462:ILE:HD12	1.91	0.52
1:B:358:LYS:HZ1	1:B:388:GLY:HA2	1.73	0.52
1:D:164:GLN:HE21	1:D:165:ASP:HB3	1.73	0.52
1:F:448:ASP:HA	1:A:237:ASN:ND2	2.23	0.52
1:B:77:PHE:CE1	1:B:80:VAL:HG23	2.44	0.52
1:B:117:MET:HE3	1:B:185:VAL:HG22	1.92	0.52
1:B:78:LEU:C	1:B:78:LEU:HD12	2.35	0.52
1:C:111:ILE:HD11	1:C:131:TRP:HD1	1.74	0.52
1:E:252:PRO:HB2	1:E:277:THR:CG2	2.39	0.52
1:E:450:TYR:CE1	1:E:489:LYS:HB2	2.44	0.52
1:B:321:PRO:HB3	1:B:347:ILE:HG22	1.92	0.52
1:C:63:TYR:CE1	1:C:86:LYS:HE3	2.45	0.52
1:D:106:LEU:HD11	1:D:156:TYR:CD2	2.45	0.52
1:B:157:ILE:N	1:B:157:ILE:HD12	2.25	0.52
1:D:285:PHE:HB3	1:D:300:MET:HE3	1.92	0.52
1:D:444:THR:OG1	1:D:452:LYS:HB3	2.10	0.52
1:A:279:TYR:CD2	1:A:334:TYR:HB2	2.45	0.52
1:C:97:VAL:HB	1:C:154:PHE:CD2	2.44	0.52
1:E:279:TYR:CD2	1:E:334:TYR:HB2	2.44	0.52
1:F:59:LYS:HD3	1:F:64:TYR:CE1	2.45	0.52
1:D:111:ILE:HD11	1:D:131:TRP:HD1	1.74	0.51
1:B:405:LYS:HE3	1:B:407:VAL:CG2	2.41	0.51
1:C:104:PRO:HA	1:C:107:ASN:ND2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:379:ALA:HB3	1:D:430:GLN:HG2	1.93	0.51
1:D:383:GLN:HG3	1:D:475:ILE:CD1	2.24	0.51
1:B:218:LEU:O	1:B:218:LEU:HD12	2.10	0.51
1:B:57:MET:CE	1:B:287:ILE:HG21	2.40	0.51
1:B:70:TYR:CZ	1:B:78:LEU:HD11	2.45	0.51
1:C:-13:SER:HA	1:C:492:LEU:HD11	1.93	0.51
1:B:223:PHE:HB3	1:B:226:GLN:HG3	1.93	0.51
1:B:110:ASN:HB2	1:B:132:GLU:HB2	1.92	0.51
1:D:42:PHE:HB2	1:D:50:ILE:HD11	1.93	0.51
1:E:80:VAL:HG21	1:E:127:MET:CE	2.40	0.51
1:A:53:HIS:CE1	1:A:313:ASN:HA	2.45	0.50
1:A:57:MET:HE3	1:A:300:MET:HE1	1.93	0.50
1:A:356:ARG:HD2	1:A:393:GLN:OE1	2.10	0.50
1:E:115:LYS:HG3	1:E:182:ASN:OD1	2.11	0.50
1:F:135:ILE:HD12	1:F:135:ILE:N	2.27	0.50
1:D:398:ASP:HA	1:D:404:LYS:HG2	1.94	0.50
1:A:126:VAL:HG21	1:A:212:TYR:HB2	1.93	0.50
1:A:223:PHE:CE2	1:A:242:LEU:HD23	2.47	0.50
1:E:277:THR:HG22	1:E:277:THR:O	2.11	0.50
1:A:114:PRO:HB2	1:A:127:MET:HE3	1.94	0.50
1:E:413:ARG:NH1	1:E:432:THR:HG22	2.27	0.50
1:F:286:ILE:HD13	1:F:322:LEU:HD22	1.94	0.49
1:B:284:THR:HG22	1:B:300:MET:O	2.11	0.49
1:E:110:ASN:HB2	1:E:132:GLU:HB2	1.94	0.49
1:A:223:PHE:HB3	1:A:226:GLN:NE2	2.27	0.49
1:D:117:MET:HE2	1:D:128:TRP:CD1	2.47	0.49
1:D:147:SER:HB2	1:D:154:PHE:HA	1.94	0.49
1:D:200:ASN:HB3	1:D:229:GLU:OE2	2.11	0.49
1:B:381:ILE:HG12	1:B:429:ILE:HA	1.94	0.49
1:E:284:THR:HG22	1:E:300:MET:O	2.13	0.49
1:D:398:ASP:HB2	1:D:404:LYS:NZ	2.28	0.49
1:D:130:HIS:NE2	1:D:179:ARG:HA	2.27	0.49
1:F:363:ASN:HB2	1:F:484:THR:OG1	2.13	0.49
1:A:106:LEU:HA	1:A:109:CYS:SG	2.52	0.49
1:C:-12:MET:CG	1:E:155:THR:HG22	2.37	0.49
1:C:50:ILE:HG23	1:C:83:TYR:CZ	2.48	0.49
1:D:115:LYS:HE3	1:D:182:ASN:OD1	2.13	0.49
1:D:465:ARG:HD3	1:D:466:LYS:HE2	1.95	0.49
1:C:399:VAL:HG21	1:C:440:HIS:NE2	2.28	0.48
1:F:430:GLN:O	1:F:430:GLN:HG3	2.13	0.48
1:A:71:ARG:NH1	1:A:312:VAL:HG11	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:229:GLU:OE2	1:B:247:CYS:HB2	2.12	0.48
1:E:230:ALA:N	1:E:231:PRO:HD3	2.28	0.48
1:D:84:ARG:HG2	1:D:94:ARG:HD3	1.95	0.48
1:E:97:VAL:HB	1:E:154:PHE:CD2	2.48	0.48
1:E:381:ILE:HD13	1:E:429:ILE:HA	1.95	0.48
1:B:33:GLU:HG2	1:B:35:VAL:HG12	1.95	0.48
1:B:84:ARG:HE	1:B:94:ARG:NE	1.96	0.48
1:C:98:LEU:HD22	1:C:127:MET:CE	2.42	0.48
1:D:420:GLU:HG2	1:D:438:ASN:ND2	2.28	0.48
1:F:284:THR:HG22	1:F:300:MET:O	2.13	0.48
1:F:395:TYR:CE2	1:F:409:VAL:HG22	2.49	0.48
1:C:223:PHE:CE2	1:C:242:LEU:HD23	2.47	0.48
1:E:106:LEU:HD11	1:E:156:TYR:CD2	2.47	0.48
1:B:106:LEU:HD22	1:B:111:ILE:HD11	1.95	0.48
1:D:429:ILE:C	1:D:429:ILE:HD12	2.38	0.48
1:F:413:ARG:NH1	1:F:432:THR:HG22	2.29	0.48
1:A:106:LEU:HD11	1:A:156:TYR:CD2	2.49	0.48
1:A:381:ILE:HG12	1:A:429:ILE:HA	1.95	0.48
1:E:71:ARG:HH11	1:E:75:ASN:ND2	2.11	0.48
1:F:416:ASP:OD2	1:F:438:ASN:ND2	2.47	0.48
1:A:97:VAL:HB	1:A:154:PHE:CD2	2.48	0.48
1:E:305:ALA:HA	1:E:308:TRP:CZ2	2.49	0.48
1:A:115:LYS:HG3	1:A:182:ASN:HA	1.96	0.48
1:B:125:PHE:CE2	1:B:150:PRO:HD3	2.49	0.48
1:A:146:TYR:CD2	1:A:157:ILE:HD11	2.49	0.48
1:B:484:THR:HA	1:B:487:HIS:HD2	1.79	0.47
1:F:378:ALA:HA	1:F:429:ILE:HD12	1.96	0.47
1:C:446:ILE:HG21	1:C:452:LYS:HG3	1.97	0.47
1:D:54:GLY:O	1:D:113:ARG:HA	2.14	0.47
1:D:381:ILE:HG12	1:D:429:ILE:HA	1.96	0.47
1:A:54:GLY:O	1:A:113:ARG:HA	2.14	0.47
1:C:69:GLU:HG3	1:C:111:ILE:O	2.14	0.47
1:E:129:MET:CG	1:E:143:ALA:HB3	2.45	0.47
1:F:385:THR:HG23	1:F:471:ASP:OD1	2.14	0.47
1:A:385:THR:HG23	1:A:471:ASP:OD1	2.15	0.47
1:A:170:ASP:OD1	1:A:177:MET:HG3	2.14	0.47
1:B:335:TYR:HB2	1:B:338:VAL:HG22	1.97	0.47
1:B:106:LEU:HD11	1:B:156:TYR:CD2	2.50	0.47
1:B:378:ALA:HA	1:B:429:ILE:HD12	1.97	0.47
1:C:-6:MET:HE1	1:F:155:THR:HG21	1.94	0.47
1:D:41:GLN:HB3	1:D:49:VAL:HG13	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:299:TYR:HB3	1:D:320:LEU:O	2.14	0.47
1:F:285:PHE:HE2	1:F:287:ILE:HB	1.80	0.47
1:A:161:ARG:NH2	1:A:177:MET:HG2	2.29	0.47
1:C:385:THR:HG23	1:C:471:ASP:OD1	2.14	0.47
1:D:80:VAL:HG21	1:D:127:MET:HE1	1.97	0.47
1:D:279:TYR:CD2	1:D:334:TYR:HB2	2.50	0.47
1:D:464:VAL:HG21	1:D:468:SER:O	2.15	0.47
1:D:476:GLN:OE1	1:D:478:TRP:HE3	1.98	0.47
1:F:331:GLU:HG2	1:F:333:PRO:HD3	1.97	0.47
1:A:161:ARG:HH22	1:A:177:MET:HG2	1.79	0.47
1:A:252:PRO:HB2	1:A:277:THR:HB	1.97	0.47
1:B:41:GLN:HB3	1:B:49:VAL:HG23	1.96	0.47
1:C:42:PHE:CE2	1:C:50:ILE:HD12	2.50	0.47
1:D:370:VAL:H	1:D:391:SER:HB3	1.80	0.47
1:A:129:MET:CG	1:A:143:ALA:HB3	2.45	0.47
1:B:450:TYR:HA	1:B:488:TRP:O	2.15	0.46
1:C:84:ARG:HE	1:C:94:ARG:CZ	2.28	0.46
1:D:168:VAL:HG21	1:D:176:TYR:CE1	2.50	0.46
1:D:492:LEU:H	1:D:492:LEU:HD12	1.79	0.46
1:C:57:MET:HE2	1:C:287:ILE:HD13	1.97	0.46
1:E:70:TYR:HB3	1:E:79:GLY:O	2.15	0.46
1:A:69:GLU:HG2	1:A:112:GLU:HA	1.97	0.46
1:D:236:ARG:HA	1:D:297:TYR:OH	2.16	0.46
1:D:54:GLY:HA2	1:D:284:THR:HG21	1.98	0.46
1:D:369:ASP:OD1	1:D:391:SER:HB2	2.16	0.46
1:F:98:LEU:CD2	1:F:129:MET:HE1	2.46	0.46
1:D:464:VAL:HG13	1:D:464:VAL:O	2.15	0.46
1:F:209:THR:HB	1:F:210:PRO:HD2	1.98	0.46
1:D:353:ASP:OD1	1:D:355:THR:HG23	2.15	0.46
1:A:130:HIS:CD2	1:A:179:ARG:HA	2.51	0.46
1:C:59:LYS:HD3	1:C:64:TYR:CE1	2.51	0.46
1:E:362:LYS:HD3	1:E:450:TYR:CZ	2.50	0.46
1:F:351:ILE:HD12	1:F:351:ILE:N	2.31	0.46
1:D:110:ASN:HB2	1:D:132:GLU:HB2	1.97	0.46
1:D:106:LEU:HA	1:D:109:CYS:SG	2.56	0.46
1:D:296:SER:HB3	1:D:347:ILE:HD11	1.96	0.46
1:E:351:ILE:N	1:E:351:ILE:HD12	2.29	0.46
1:A:41:GLN:HB3	1:A:49:VAL:HG23	1.96	0.46
1:B:287:ILE:HA	1:B:288:PRO:HD3	1.85	0.46
1:D:446:ILE:HG13	1:D:450:TYR:O	2.15	0.46
1:A:64:TYR:CD2	1:A:88:LEU:HD11	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:130:HIS:CE1	1:B:179:ARG:HA	2.52	0.45
1:C:285:PHE:HE2	1:C:287:ILE:HB	1.81	0.45
1:E:70:TYR:O	1:E:78:LEU:HB3	2.16	0.45
1:A:77:PHE:CZ	1:A:80:VAL:HG23	2.51	0.45
1:A:111:ILE:HD11	1:A:131:TRP:HD1	1.81	0.45
1:A:273:LEU:HD21	1:A:332:LEU:CB	2.46	0.45
1:C:203:LEU:HD21	1:C:231:PRO:HB3	1.97	0.45
1:E:320:LEU:HB2	1:E:332:LEU:HD11	1.98	0.45
1:F:465:ARG:HE	1:F:474:ILE:HG21	1.81	0.45
1:C:130:HIS:CE1	1:C:179:ARG:HA	2.52	0.45
1:E:465:ARG:HG2	1:E:466:LYS:HG2	1.98	0.45
1:F:291:GLY:HA3	1:F:344:SER:C	2.42	0.45
1:A:351:ILE:HD12	1:A:351:ILE:N	2.32	0.45
1:C:179:ARG:HG3	1:C:200:ASN:OD1	2.17	0.45
1:C:354:THR:HG22	1:C:354:THR:O	2.15	0.45
1:D:449:GLY:CA	1:D:489:LYS:HD2	2.46	0.45
1:B:115:LYS:HG3	1:B:182:ASN:HA	1.97	0.45
1:C:63:TYR:CE1	1:C:84:ARG:NH1	2.85	0.45
1:B:72:ASP:HA	1:B:78:LEU:HD23	1.99	0.45
1:C:223:PHE:CD1	1:C:270:LEU:HD11	2.51	0.45
1:D:87:ASP:O	1:D:88:LEU:HB2	2.16	0.45
1:D:149:THR:OG1	1:D:152:GLY:HA3	2.17	0.45
1:A:395:TYR:CE2	1:A:409:VAL:HG22	2.52	0.45
1:C:57:MET:CE	1:C:287:ILE:HD13	2.47	0.45
1:C:287:ILE:HA	1:C:288:PRO:HD3	1.83	0.45
1:E:133:ASN:OD1	1:E:135:ILE:HG13	2.17	0.45
1:F:382:VAL:HA	1:F:475:ILE:HG12	1.99	0.45
1:D:129:MET:CG	1:D:143:ALA:HB3	2.47	0.45
1:D:398:ASP:HB2	1:D:404:LYS:HZ2	1.81	0.45
1:E:114:PRO:HB2	1:E:127:MET:HE3	1.99	0.45
1:F:55:GLY:HA3	1:F:67:TYR:O	2.17	0.45
1:B:50:ILE:HG23	1:B:83:TYR:CE1	2.52	0.44
1:B:129:MET:CG	1:B:143:ALA:HB3	2.46	0.44
1:A:131:TRP:CE3	1:A:141:ARG:HD2	2.52	0.44
1:C:64:TYR:O	1:C:84:ARG:HA	2.17	0.44
1:C:284:THR:HG22	1:C:300:MET:O	2.17	0.44
1:D:384:TRP:CZ3	1:D:471:ASP:HB3	2.52	0.44
1:D:451:TYR:CD2	1:D:489:LYS:HG3	2.52	0.44
1:A:84:ARG:HD2	1:A:94:ARG:CD	2.48	0.44
1:A:130:HIS:NE2	1:A:179:ARG:HA	2.33	0.44
1:B:466:LYS:HE2	1:B:466:LYS:HA	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:55:GLY:HA3	1:E:67:TYR:O	2.18	0.44
1:F:97:VAL:HB	1:F:154:PHE:CD2	2.52	0.44
1:B:106:LEU:HD21	1:B:156:TYR:CE2	2.53	0.44
1:C:378:ALA:HA	1:C:429:ILE:HD12	2.00	0.44
1:E:50:ILE:HG23	1:E:83:TYR:CE1	2.52	0.44
1:F:256:LYS:HD3	1:F:270:LEU:HB3	2.00	0.44
1:B:285:PHE:HB3	1:B:300:MET:HE3	1.99	0.44
1:C:42:PHE:CE2	1:C:91:TRP:CD1	3.05	0.44
1:D:129:MET:HG2	1:D:143:ALA:HB3	1.99	0.44
1:D:305:ALA:HB3	1:D:311:LYS:O	2.18	0.44
1:A:124:GLU:OE1	1:A:213:LYS:HE3	2.18	0.44
1:B:63:TYR:CZ	1:B:84:ARG:NH1	2.86	0.44
1:D:35:VAL:HG21	1:D:337:SER:HB3	1.98	0.44
1:D:243:ILE:N	1:D:243:ILE:HD12	2.32	0.44
1:E:299:TYR:HB3	1:E:320:LEU:O	2.17	0.44
1:F:179:ARG:HD2	1:F:200:ASN:OD1	2.18	0.44
1:B:118:TYR:HD2	1:B:125:PHE:CE1	2.35	0.44
1:E:122:THR:OG1	1:E:124:GLU:HG2	2.17	0.44
1:A:243:ILE:N	1:A:243:ILE:HD12	2.33	0.44
1:B:403:TYR:CD1	1:B:442:LYS:HB2	2.52	0.44
1:D:269:GLN:HG3	1:D:271:TYR:CE1	2.52	0.44
1:D:361:ASN:HB3	1:D:364:SER:OG	2.18	0.44
1:A:57:MET:HB2	1:A:300:MET:HE1	1.98	0.44
1:B:356:ARG:HD3	1:B:393:GLN:HE22	1.80	0.43
1:C:194:ILE:HD11	1:C:203:LEU:HD23	2.00	0.43
1:D:377:ASN:HD21	1:D:432:THR:H	1.66	0.43
1:D:383:GLN:HE21	1:D:475:ILE:CD1	2.31	0.43
1:F:243:ILE:N	1:F:243:ILE:HD12	2.32	0.43
1:F:461:LEU:CD1	1:F:486:GLN:HB3	2.40	0.43
1:D:383:GLN:NE2	1:D:488:TRP:CH2	2.86	0.43
1:A:228:ARG:HH22	1:A:256:LYS:HE3	1.83	0.43
1:E:57:MET:HE2	1:E:287:ILE:HD13	2.00	0.43
1:E:378:ALA:HA	1:E:429:ILE:HD12	1.99	0.43
1:B:156:TYR:OH	1:B:159:SER:HB3	2.18	0.43
1:B:362:LYS:CG	1:B:484:THR:HB	2.48	0.43
1:B:446:ILE:HD13	1:B:452:LYS:HG3	1.99	0.43
1:C:270:LEU:HD12	1:C:270:LEU:N	2.33	0.43
1:C:384:TRP:CG	2:C:602:GAL:HO3	2.35	0.43
1:E:492:LEU:HD12	1:E:492:LEU:N	2.33	0.43
1:A:291:GLY:HA3	1:A:344:SER:C	2.44	0.43
1:B:362:LYS:HE2	1:B:450:TYR:CZ	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:136:ASN:HB2	1:A:424:ASP:O	2.18	0.43
1:C:390:LEU:HB3	1:C:410:LYS:HB2	1.99	0.43
1:E:109:CYS:HB2	1:E:132:GLU:O	2.18	0.43
1:A:279:TYR:CE2	1:A:334:TYR:HB2	2.53	0.43
1:C:350:TYR:O	1:C:352:PRO:HD3	2.19	0.43
1:F:57:MET:HB2	1:F:300:MET:HE1	2.01	0.43
1:D:420:GLU:O	1:D:457:HIS:CE1	2.72	0.43
1:E:403:TYR:CE1	1:E:442:LYS:HB2	2.54	0.43
1:F:448:ASP:CA	1:A:237:ASN:HD21	2.32	0.43
1:A:450:TYR:CE2	1:A:489:LYS:HE3	2.53	0.43
1:B:305:ALA:HA	1:B:308:TRP:CZ2	2.54	0.43
1:D:351:ILE:N	1:D:351:ILE:HD12	2.34	0.43
1:D:395:TYR:CZ	1:D:409:VAL:HG22	2.54	0.43
1:E:111:ILE:HD11	1:E:131:TRP:CD1	2.47	0.43
1:C:58:LEU:HD22	1:C:116:VAL:HG12	2.01	0.43
1:C:243:ILE:N	1:C:243:ILE:HD12	2.34	0.43
1:E:58:LEU:HD22	1:E:116:VAL:HG12	2.01	0.43
1:E:235:LYS:HD2	1:E:240:TYR:CE2	2.54	0.43
1:F:115:LYS:HG3	1:F:182:ASN:HA	2.00	0.43
1:D:170:ASP:CG	1:D:177:MET:HG3	2.43	0.42
1:D:338:VAL:HG12	1:D:340:ILE:HG23	2.01	0.42
1:E:131:TRP:CZ3	1:E:141:ARG:HD2	2.54	0.42
1:F:492:LEU:N	1:F:492:LEU:HD12	2.34	0.42
1:D:278:THR:HG22	1:D:278:THR:O	2.19	0.42
1:A:226:GLN:NE2	1:A:270:LEU:HD21	2.32	0.42
1:E:59:LYS:HD3	1:E:64:TYR:CE1	2.54	0.42
1:F:59:LYS:HD3	1:F:64:TYR:CD1	2.54	0.42
1:A:117:MET:HE3	1:A:185:VAL:HG22	2.01	0.42
1:B:359:LEU:HD12	1:B:368:LEU:HD22	2.02	0.42
1:B:450:TYR:CE1	1:B:489:LYS:HB2	2.54	0.42
1:A:240:TYR:O	1:A:259:TYR:HA	2.18	0.42
1:B:147:SER:HB2	1:B:154:PHE:HA	2.01	0.42
1:F:70:TYR:O	1:F:78:LEU:HB2	2.19	0.42
1:D:483:GLY:C	1:D:485:ASN:H	2.26	0.42
1:E:251:ASN:HA	1:E:252:PRO:HD3	1.92	0.42
1:E:254:GLN:NE2	1:E:273:LEU:H	2.17	0.42
1:E:286:ILE:HD13	1:E:322:LEU:HD22	2.02	0.42
1:E:384:TRP:CE3	1:E:471:ASP:HB3	2.54	0.42
1:A:270:LEU:N	1:A:270:LEU:HD22	2.35	0.42
1:B:34:GLY:O	1:B:339:LYS:HA	2.19	0.42
1:D:83:TYR:HB3	1:D:91:TRP:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:57:MET:CE	1:E:287:ILE:HD13	2.49	0.42
1:C:106:LEU:HA	1:C:109:CYS:SG	2.59	0.42
1:A:115:LYS:HB3	1:A:183:VAL:HG22	2.02	0.42
1:C:491:VAL:HG12	1:C:492:LEU:O	2.20	0.42
1:D:458:CYS:SG	1:D:460:LYS:HE3	2.60	0.42
1:F:80:VAL:O	1:F:97:VAL:HG22	2.20	0.42
1:E:381:ILE:HG12	1:E:415:LEU:CD1	2.50	0.42
1:F:70:TYR:HB3	1:F:79:GLY:O	2.19	0.42
1:F:161:ARG:HH22	1:F:177:MET:HG2	1.83	0.42
1:C:42:PHE:HE2	1:C:91:TRP:CD1	2.38	0.41
1:D:97:VAL:HB	1:D:154:PHE:HD2	1.84	0.41
1:A:57:MET:CB	1:A:300:MET:HE1	2.50	0.41
1:A:87:ASP:O	1:A:88:LEU:HB2	2.20	0.41
1:A:135:ILE:HD12	1:A:135:ILE:N	2.35	0.41
1:A:411:SER:C	1:A:413:ARG:H	2.28	0.41
1:D:420:GLU:O	1:D:457:HIS:HE1	2.03	0.41
1:F:64:TYR:CG	1:F:88:LEU:HD21	2.55	0.41
1:D:377:ASN:ND2	1:D:432:THR:HG23	2.31	0.41
1:F:87:ASP:O	1:F:88:LEU:HB2	2.20	0.41
1:B:278:THR:HG22	1:B:278:THR:O	2.21	0.41
1:C:130:HIS:CE1	1:C:179:ARG:HD3	2.56	0.41
1:C:142:ALA:O	1:C:159:SER:HA	2.20	0.41
1:A:103:ALA:HB1	1:A:104:PRO:HD2	2.01	0.41
1:B:321:PRO:HB3	1:B:347:ILE:CG2	2.50	0.41
1:B:419:ASP:OD1	2:B:601:GAL:H62	2.20	0.41
1:C:128:TRP:HB3	1:C:193:PHE:CE1	2.56	0.41
1:D:288:PRO:HB3	1:D:297:TYR:CE1	2.56	0.41
1:A:354:THR:HG22	1:A:354:THR:O	2.20	0.41
1:B:229:GLU:O	1:B:230:ALA:C	2.64	0.41
1:C:305:ALA:HA	1:C:308:TRP:CZ2	2.55	0.41
1:D:59:LYS:HD3	1:D:64:TYR:CD1	2.56	0.41
1:D:234:ILE:HD11	1:D:241:TYR:HB2	2.02	0.41
1:E:422:LYS:HE2	1:E:457:HIS:NE2	2.36	0.41
1:F:75:ASN:CG	1:F:312:VAL:HG23	2.46	0.41
1:F:147:SER:HB2	1:F:154:PHE:HA	2.02	0.41
1:F:206:TYR:HB3	1:F:215:ILE:HG23	2.01	0.41
1:B:110:ASN:OD1	1:B:134:GLY:HA2	2.19	0.41
1:E:62:ASP:O	1:E:86:LYS:HG2	2.21	0.41
1:B:422:LYS:HG2	1:B:458:CYS:HB3	2.01	0.41
1:C:305:ALA:HB3	1:C:311:LYS:O	2.20	0.41
1:D:44:ASP:HB3	1:D:50:ILE:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:354:THR:HG22	1:D:354:THR:O	2.21	0.41
1:E:243:ILE:HD12	1:E:243:ILE:N	2.35	0.41
1:E:277:THR:HG22	1:E:280:ARG:HA	2.02	0.41
1:A:100:ARG:HD2	1:A:107:ASN:O	2.21	0.41
1:A:122:THR:OG1	1:A:124:GLU:HG2	2.20	0.41
1:C:377:ASN:OD1	1:C:431:TYR:HA	2.21	0.41
1:D:234:ILE:C	1:D:234:ILE:HD12	2.46	0.41
1:D:376:ASP:O	1:D:379:ALA:HB2	2.21	0.41
1:E:50:ILE:HG23	1:E:83:TYR:CZ	2.55	0.41
1:A:156:TYR:OH	1:A:159:SER:HB3	2.20	0.41
1:F:161:ARG:HH22	1:F:177:MET:CG	2.34	0.41
1:A:53:HIS:CD2	1:A:53:HIS:N	2.88	0.41
1:A:108:HIS:CD2	1:A:135:ILE:HD11	2.56	0.41
1:B:50:ILE:HG23	1:B:83:TYR:CZ	2.56	0.40
1:B:109:CYS:HB2	1:B:132:GLU:O	2.21	0.40
1:B:305:ALA:HA	1:B:308:TRP:CH2	2.56	0.40
1:D:111:ILE:HA	1:D:130:HIS:O	2.21	0.40
1:E:128:TRP:CZ3	1:E:144:VAL:HG22	2.56	0.40
1:E:305:ALA:HA	1:E:308:TRP:CH2	2.56	0.40
1:A:287:ILE:HA	1:A:288:PRO:HD3	1.91	0.40
1:A:360:VAL:HG22	1:A:367:VAL:CG1	2.48	0.40
1:A:384:TRP:CZ3	1:A:471:ASP:HB3	2.56	0.40
1:B:420:GLU:HB3	1:B:457:HIS:CE1	2.56	0.40
1:C:-13:SER:HA	1:C:492:LEU:CD1	2.51	0.40
1:D:366:LYS:HB3	1:D:384:TRP:O	2.21	0.40
1:E:126:VAL:HG21	1:E:212:TYR:HB2	2.03	0.40
1:E:354:THR:HG22	1:E:354:THR:O	2.21	0.40
1:B:218:LEU:HD12	1:B:218:LEU:C	2.47	0.40
1:C:115:LYS:HB3	1:C:183:VAL:HG22	2.03	0.40
1:C:206:TYR:HB3	1:C:215:ILE:HG23	2.03	0.40
1:A:399:VAL:HG11	1:A:405:LYS:HG3	2.03	0.40
1:B:243:ILE:N	1:B:243:ILE:HD12	2.37	0.40
1:E:375:VAL:HG12	1:E:411:SER:HB3	2.04	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	459/526 (87%)	431 (94%)	28 (6%)	0	100	100
1	B	459/526 (87%)	432 (94%)	27 (6%)	0	100	100
1	C	480/526 (91%)	461 (96%)	19 (4%)	0	100	100
1	D	459/526 (87%)	431 (94%)	28 (6%)	0	100	100
1	E	459/526 (87%)	436 (95%)	22 (5%)	1 (0%)	43	72
1	F	459/526 (87%)	441 (96%)	18 (4%)	0	100	100
All	All	2775/3156 (88%)	2632 (95%)	142 (5%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	390	LEU

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	389/442 (88%)	387 (100%)	2 (0%)	81	83
1	B	389/442 (88%)	388 (100%)	1 (0%)	86	86
1	C	402/442 (91%)	400 (100%)	2 (0%)	81	83
1	D	389/442 (88%)	385 (99%)	4 (1%)	68	78
1	E	389/442 (88%)	389 (100%)	0	100	100
1	F	389/442 (88%)	388 (100%)	1 (0%)	86	86

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	2347/2652 (88%)	2337 (100%)	10 (0%)	84 85

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	78	LEU
1	C	203	LEU
1	C	427	VAL
1	D	339	LYS
1	D	346	ILE
1	D	347	ILE
1	D	460	LYS
1	F	270	LEU
1	A	287	ILE
1	A	427	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (40) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	171	HIS
1	B	269	GLN
1	B	430	GLN
1	C	-8	GLN
1	C	60	HIS
1	C	75	ASN
1	C	107	ASN
1	C	164	GLN
1	C	198	ASN
1	C	269	GLN
1	C	457	HIS
1	D	164	GLN
1	D	254	GLN
1	D	377	ASN
1	D	383	GLN
1	D	392	GLN
1	D	430	GLN
1	D	434	ASN
1	D	457	HIS
1	E	53	HIS
1	E	75	ASN
1	E	130	HIS

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Mol	Chain	Res	Type
1	E	171	HIS
1	E	226	GLN
1	E	269	GLN
1	E	361	ASN
1	E	393	GLN
1	E	457	HIS
1	F	41	GLN
1	F	60	HIS
1	F	110	ASN
1	F	171	HIS
1	F	313	ASN
1	F	457	HIS
1	F	487	HIS
1	A	53	HIS
1	A	60	HIS
1	A	226	GLN
1	A	227	GLN
1	A	430	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](#)

7 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the

expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	GAL	C	602	-	12,12,12	0.52	0	17,17,17	0.55	0
2	GAL	F	602	-	12,12,12	0.54	0	17,17,17	0.52	0
2	GAL	C	601	-	12,12,12	0.54	0	17,17,17	0.58	0
2	GAL	B	601	-	12,12,12	0.53	0	17,17,17	0.53	0
2	GAL	A	601	-	12,12,12	0.52	0	17,17,17	0.56	0
2	GAL	E	601	-	12,12,12	0.51	0	17,17,17	0.53	0
2	GAL	F	601	-	12,12,12	0.54	0	17,17,17	0.55	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	GAL	C	602	-	-	0/2/22/22	0/1/1/1
2	GAL	F	602	-	-	0/2/22/22	0/1/1/1
2	GAL	C	601	-	-	1/2/22/22	0/1/1/1
2	GAL	B	601	-	-	1/2/22/22	0/1/1/1
2	GAL	A	601	-	-	1/2/22/22	0/1/1/1
2	GAL	E	601	-	-	1/2/22/22	0/1/1/1
2	GAL	F	601	-	-	0/2/22/22	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	601	GAL	O5-C5-C6-O6
2	E	601	GAL	O5-C5-C6-O6
2	C	601	GAL	O5-C5-C6-O6
2	B	601	GAL	O5-C5-C6-O6

There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	602	GAL	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	601	GAL	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	461/526 (87%)	0.39	9 (1%) 65 44	57, 86, 108, 120	0
1	B	461/526 (87%)	0.40	11 (2%) 59 39	66, 96, 121, 129	0
1	C	482/526 (91%)	0.19	6 (1%) 76 57	47, 66, 86, 125	0
1	D	461/526 (87%)	0.97	51 (11%) 10 6	58, 104, 174, 183	0
1	E	461/526 (87%)	0.21	4 (0%) 81 64	50, 73, 94, 111	0
1	F	461/526 (87%)	0.24	5 (1%) 78 60	45, 68, 88, 115	0
All	All	2787/3156 (88%)	0.40	86 (3%) 51 31	45, 80, 133, 183	0

All (86) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	383	GLN	5.4
1	A	229	GLU	4.4
1	F	493	VAL	4.4
1	D	493	VAL	4.3
1	A	493	VAL	4.3
1	D	453	ILE	4.2
1	D	368	LEU	3.5
1	D	375	VAL	3.4
1	B	339	LYS	3.4
1	D	477	GLN	3.4
1	C	69	GLU	3.3
1	D	393	GLN	3.3
1	D	276	SER	3.2
1	D	492	LEU	3.2
1	D	384	TRP	3.2
1	B	469	THR	3.1
1	D	390	LEU	3.1
1	D	110	ASN	3.1
1	D	360	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
1	D	411	SER	3.0
1	A	228	ARG	3.0
1	F	388	GLY	3.0
1	D	337	SER	3.0
1	A	247	CYS	3.0
1	D	434	ASN	2.9
1	D	427	VAL	2.9
1	D	455	SER	2.8
1	D	380	GLN	2.8
1	C	-4	ARG	2.8
1	D	415	LEU	2.8
1	D	448	ASP	2.8
1	E	390	LEU	2.8
1	B	493	VAL	2.8
1	C	472	GLY	2.8
1	D	491	VAL	2.7
1	E	393	GLN	2.7
1	D	396	LEU	2.7
1	D	443	PHE	2.6
1	C	110	ASN	2.6
1	D	50	ILE	2.6
1	D	63	TYR	2.6
1	D	374	SER	2.6
1	B	388	GLY	2.6
1	A	172	GLY	2.6
1	D	394	TRP	2.5
1	D	462	ILE	2.5
1	D	317	TYR	2.5
1	B	220	ALA	2.5
1	B	387	ASN	2.5
1	E	331	GLU	2.5
1	D	474	ILE	2.5
1	C	137	TYR	2.5
1	B	358	LYS	2.5
1	D	359	LEU	2.4
1	D	428	LEU	2.4
1	D	406	ILE	2.4
1	D	295	THR	2.4
1	D	358	LYS	2.3
1	D	410	LYS	2.3
1	B	412	GLY	2.3
1	D	382	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	238	GLY	2.3
1	D	417	VAL	2.2
1	D	95	GLY	2.2
1	C	-13	SER	2.2
1	A	236	ARG	2.2
1	B	389	SER	2.2
1	F	449	GLY	2.2
1	A	108	HIS	2.2
1	D	57	MET	2.1
1	A	473	GLY	2.1
1	F	247	CYS	2.1
1	D	432	THR	2.1
1	D	426	GLY	2.1
1	D	444	THR	2.1
1	D	421	SER	2.1
1	D	126	VAL	2.1
1	D	108	HIS	2.1
1	D	395	TYR	2.1
1	E	412	GLY	2.1
1	A	331	GLU	2.1
1	F	331	GLU	2.0
1	D	391	SER	2.0
1	D	488	TRP	2.0
1	D	405	LYS	2.0
1	B	340	ILE	2.0

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 oligosaccharides in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	GAL	C	602	12/12	0.65	0.18	80,96,102,105	0
2	GAL	E	601	12/12	0.79	0.15	68,77,83,84	0
2	GAL	B	601	12/12	0.87	0.12	74,86,88,99	0
2	GAL	F	602	12/12	0.87	0.11	62,66,71,73	0
2	GAL	C	601	12/12	0.88	0.14	67,74,80,90	0
2	GAL	A	601	12/12	0.88	0.13	64,68,72,83	0
2	GAL	F	601	12/12	0.91	0.10	57,69,75,75	0

6.5 Other polymers [i](#)

There are no such residues in this entry.