Full wwPDB X-ray Structure Validation Report ⓘ

Jan 29, 2024 – 06:44 PM EST

PDB ID	:	1F30
Title	:	THE STRUCTURAL BASIS FOR DNA PROTECTION BY E. COLI DPS PROTEIN
Authors	:	Luo, J.; Liu, D.; White, M.A.; Fox, R.O.
Deposited on	:	2000-05-31
Resolution	:	2.85 Å(reported)

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

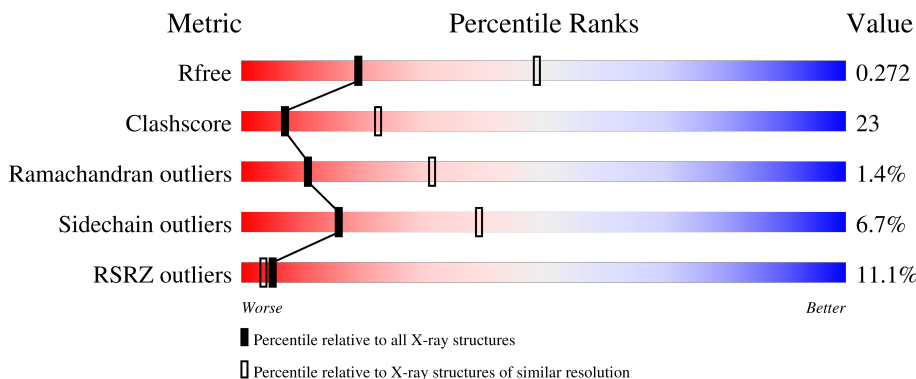|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 2.85 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	Percentile Ranks	Value
Rfree		0.272
Clashscore		23
Ramachandran outliers		1.4%
Sidechain outliers		6.7%
RSRZ outliers		11.1%

Worse   *Better*

■ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3168 (2.90-2.82)
Clashscore	141614	3438 (2.90-2.82)
Ramachandran outliers	138981	3348 (2.90-2.82)
Sidechain outliers	138945	3351 (2.90-2.82)
RSRZ outliers	127900	3103 (2.90-2.82)

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	167	54% 35% • 7%
1	B	167	54% 34% 5% 7%
1	C	167	61% 30% • 7%
1	D	167	61% 29% • 7%
1	E	167	57% 31% 5% 7%

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Mol	Chain	Length	Quality of chain
1	F	167	54% 35% 7%
1	G	167	23% / 54% 35% 7%
1	H	167	33% / 53% 37% 7%
1	I	167	6% / 53% 37% 7%
1	J	167	13% / 53% 37% 7%
1	K	167	13% / 56% 35% 7%
1	L	167	33% / 61% 30% 7%

2 Entry composition ⓘ

There are 4 unique types of molecules in this entry. The entry contains 15479 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 DNA PROTECTION DURING STARVATION PROTEIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	B	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	C	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	D	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	E	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	F	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	G	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	H	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	I	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	J	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	K	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0
1	L	156	Total 1236	C 776	N 216	O 241	S 3	0	0	0

- Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	C	1	Total 1	Zn 1	0	0
2	D	1	Total 1	Zn 1	0	0
2	E	1	Total 1	Zn 1	0	0
2	F	1	Total 1	Zn 1	0	0
2	G	1	Total 1	Zn 1	0	0
2	H	1	Total 1	Zn 1	0	0
2	I	1	Total 1	Zn 1	0	0
2	J	1	Total 1	Zn 1	0	0
2	K	1	Total 1	Zn 1	0	0
2	L	1	Total 1	Zn 1	0	0

- Molecule 3 is 2-AMINO-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (three-letter code: TRS) (formula: $C_4H_{12}NO_3$).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total 8	C 4	N 1	O 3	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total 8	C 4	N 1	O 3	0	0
3	C	1	Total 8	C 4	N 1	O 3	0	0
3	D	1	Total 8	C 4	N 1	O 3	0	0
3	E	1	Total 8	C 4	N 1	O 3	0	0
3	F	1	Total 8	C 4	N 1	O 3	0	0
3	I	1	Total 8	C 4	N 1	O 3	0	0
3	J	1	Total 8	C 4	N 1	O 3	0	0
3	J	1	Total 8	C 4	N 1	O 3	0	0
3	K	1	Total 8	C 4	N 1	O 3	0	0
3	L	1	Total 8	C 4	N 1	O 3	0	0
3	L	1	Total 8	C 4	N 1	O 3	0	0

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	57	Total 57	O 57	0	0
4	B	61	Total 61	O 61	0	0
4	C	68	Total 68	O 68	0	0
4	D	70	Total 70	O 70	0	0
4	E	73	Total 73	O 73	0	0
4	F	88	Total 88	O 88	0	0
4	G	17	Total 17	O 17	0	0
4	H	13	Total 13	O 13	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	I	28	Total 28	O 28	0	0
4	J	25	Total 25	O 25	0	0
4	K	25	Total 25	O 25	0	0
4	L	14	Total 14	O 14	0	0

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.
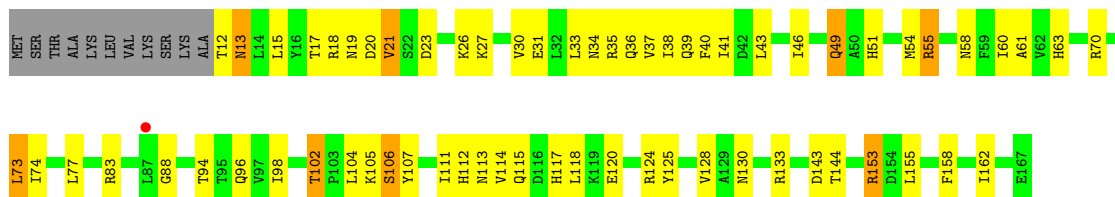
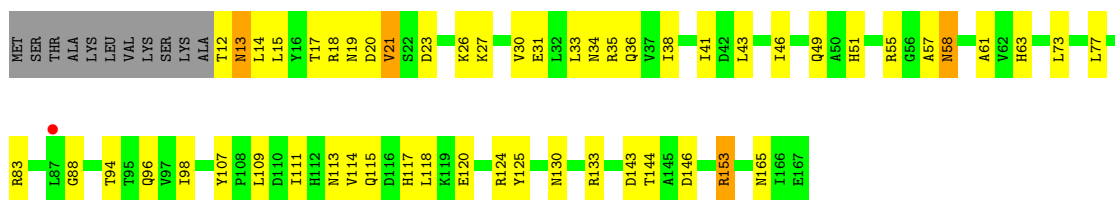- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain A:
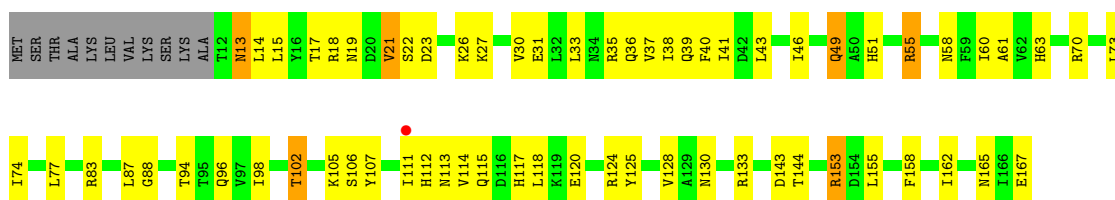
- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN
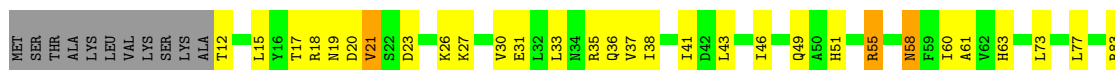
Chain B:

- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain C:

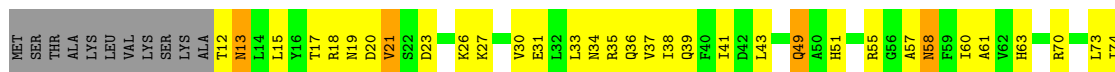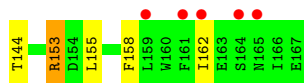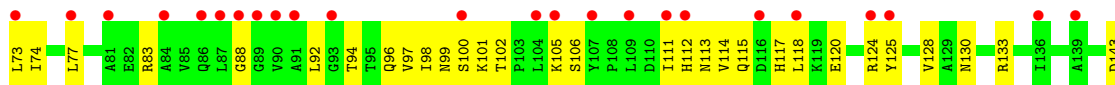- Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain D:

G88 Q96 V97 I98 N99 K105 S106 Y107 I111 H112 N113 V114 Q115 D116 H117 L118 K119 E120 R124 Y125 N130 R133 D143 T144 A145 D146 R153 N165 I166 E167

• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain E:

%

57%   31%   5%   7%

MET SER THR ALA LYS LEU VAL LYS SER LYS ALA T12 N13 L14 L15 Y16 T17 R18 N19 D20 V21 S22 D23 K26 V30 E31 L32 L33 N34 R35 Q36 Q39 F40 I41 D42 L43 Q49 A50 H51 M54 R55 G56 A57 N58 F59 I60 A61 V62 H63 R70 L73 I74

L77 R83 G88 T94 T95 Q96 V97 I98 T102 K105 S106 L109 D110 I111 H112 N113 V114 Q115 D116 H117 L118 K119 E120 R124 Y125 V128 A129 N130 R133 D141 D142 D143 T144 A145 D146 R153 D154 L155 N165 I166 E167

• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain F:

54%   35%   •   7%

MET SER THR ALA LYS LEU VAL LYS SER LYS ALA T12 N13 L14 L15 Y16 T17 R18 N19 D20 V21 S22 D23 K26 K27 V30 E31 L32 L33 N34 R35 Q36 V37 I38 Q39 F40 I41 D42 L43 Q49 A50 H51 R55 G56 A57 N58 F59 I60 A61 V62 H63 R70 L73 I74

L77 R83 G88 G89 V90 T94 T95 Q96 V97 I98 L104 K105 S106 I111 H112 N113 V114 Q115 D116 H117 L118 K119 E120 R124 Y125 V128 A129 N130 R133 E138 D142 D143 T144 A145 D146 R153 F158 I162 E167

• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain G:

23%

54%   35%   •   7%

MET SER THR ALA LYS LEU VAL LYS SER LYS ALA T12 N13 L14 L15 Y16 T17 R18 N19 D20 V21 S22 D23 K26 K27 A28 T29 V30 E31 L32 L33 N34 R35 Q36 V37 I38 Q39 F40 I41 D42 L43 S44 Q49 A50 H51 W52 R55 N58 F59 I60 A61 V62 H63 R70

L73 I74 L77 A81 E82 R83 A84 V85 Q86 L87 G88 G89 V90 A91 L92 G93 T94 T95 Q96 V97 I98 N99 S100 K101 T102 P103 L104 K105 S106 Y107 P108 L109 D110 I111 H112 N113 V114 Q115 D116 H117 L118 K119 E120 R124 Y125 V128 A129 N130 R133 I136 A139 D143

T144 R153 D154 L155 F158 L159 W160 F161 I162 E163 S164 N165 I166 E167

• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain H:

33%

53%   37%   •   7%

MET SER THR ALA LYS LEU VAL LYS SER LYS ALA T12 N13 L14 L15 Y16 T17 R18 N19 D20 V21 S22 D23 K26 K27 A28 T29 V30 E31 L32 L33 N34 R35 Q36 V37 I38 Q39 F40 I41 D42 L43 I46 T47 K48 Q49 A50 H51 W52 N53 M54 R55 G56 A57 N58 F59 I60 A61 V62

H63 L66 R70 L73 I74 L77 M80 A81 E82 R83 A84 L87 G88 G89 V90 A91 L92 G93 T94 T95 Q96 V97 I98 N99 S100 K101 T102 P103 L104 K105 S106 Y107 P108 L109 D110 I111 H112 N113 V114 Q115 D116 H117 L118 K119 E120 L121 A122 D123 R124 Y125 V128 A129 N130

D131 V132 R133 K134 A139 K140 D141 D142 D143 T144 L148 R153 D154 L155 D156 K157 F158 L159 W160 F161 I162 E163 S164 N165 I166 E167
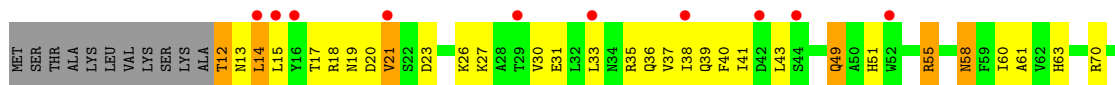
• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN
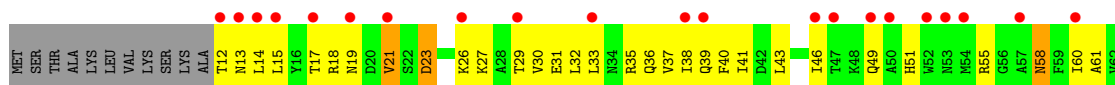
Chain I:

• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

MET SER THR ALA LYS LEU VAL LYS SER LYS ALA T12 N13 L14 L15 Y16 T17 R18 N19 D20 V21 S22 D23 K26 K27 A28 T29 V30 E31 L32 L33 N34 R35 Q36 V37 I38 Q39 F40 I41 D42 L43 Q49 A50 H51 R55 N58 F59 I60 A61 V62 H63 R70 L73 I74

D75 H76 L77 L87 G88 L92 G93 T94 T95 Q96 V97 I98 N99 T102 K105 S106 Y107 P108 L109 D110 I111 H112 N113 V114 Q115 D116 H117 L118 K119 E120 R124 Y128 V128 A129 N130 R133 D142 D143 T144 R153 D154 L155 F158 L159 W160 F161 I162 I166 E167
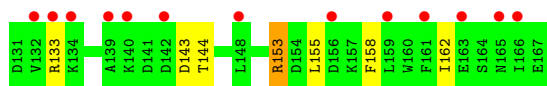
• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain J:
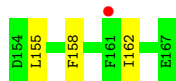
• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

MET SER THR ALA LYS LEU VAL LYS SER LYS ALA T12 N13 L14 L15 Y16 T17 R18 N19 D20 V21 S22 D23 S24 E25 K26 K27 A28 T29 V30 E31 L32 L33 N34 R35 Q36 V37 I38 Q39 F40 I41 D42 L43 I46 Q49 A50 H51 R55 N58 F59 I60 A61 V62 H63 R70

L73 I74 L77 R83 A84 L87 G88 G89 V90 A91 L92 G93 T94 T95 Q96 V97 I98 N99 S100 K101 L104 K105 S106 Y107 P108 L109 D110 I111 H112 N113 V114 Q115 D116 H117 L118 K119 E120 R124 Y125 V128 A129 N130 R133 I136 D141 D142 D143 T144 R153
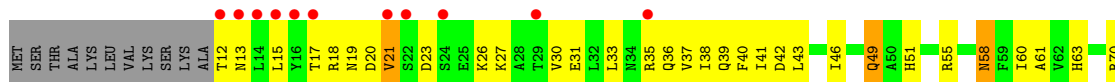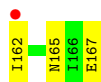
D154 L155 F158 F161 I162 E167

• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain K:

MET SER THR ALA LYS LEU VAL LYS SER LYS ALA T12 N13 L14 L15 Y16 T17 R18 N19 D20 V21 S22 D23 S24 E25 K26 K27 A28 T29 V30 E31 L32 L33 N34 R35 Q36 V37 I38 Q39 F40 I41 D42 L43 I46 Q49 A50 H51 M54 R55 N58 F59 I60 A61 V62 H63

L73 I74 L77 R83 L87 G88 A91 L92 G93 T94 T95 Q96 V97 I98 N99 S100 K101 L104 K105 S106 Y107 I111 H112 N113 V114 Q115 D116 H117 L118 K119 E120 R124 Y125 N130 D131 V132 R133 K140 D143 T144 A145 D146 I147 L148 T149 R153 F158
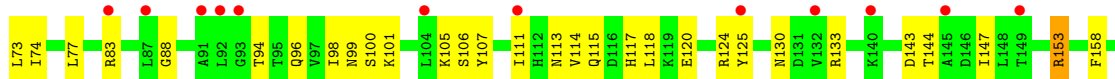
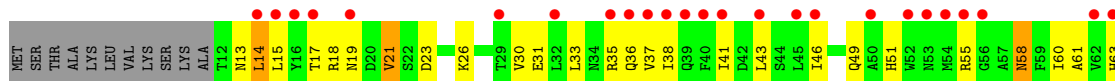I162 N165 I166 E167

• Molecule 1: DNA PROTECTION DURING STARVATION PROTEIN

Chain L:

MET SER THR ALA LYS LEU VAL LYS SER LYS ALA T12 N13 L14 L15 Y16 T17 R18 N19 D20 V21 S22 D23 K26 T29 V30 E31 L32 L33 N34 R35 Q36 V37 I38 Q39 F40 I41 D42 L43 S44 L45 I46 Q49 A50 H51 W52 N53 M54 R55 G56 A57 N58 F59 I60 A61 V62 H63

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	117.77Å 140.78Å 268.42Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.47 – 2.85 85.61 – 2.84	Depositor EDS
% Data completeness (in resolution range)	96.1 (29.47-2.85) 95.4 (85.61-2.84)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	3.60 (at 2.86Å)	Xtriage
Refinement program	CNS 0.3	Depositor
R, R_{free}	0.232 , 0.272 0.232 , 0.272	Depositor DCC
R_{free} test set	5226 reflections (10.09%)	wwPDB-VP
Wilson B-factor (Å^2)	52.4	Xtriage
Anisotropy	0.566	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 73.7	EDS
L-test for twinning[2]	$< |L| > = 0.46, < L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	15479	wwPDB-VP
Average B, all atoms (Å^2)	63.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.02% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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 ⓘ

5.1 Standard geometry ⓘ

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

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	0.39	0/1254	0.60	1/1698 (0.1%)
1	B	0.39	0/1254	0.77	3/1698 (0.2%)
1	C	0.39	0/1254	0.59	0/1698
1	D	0.40	0/1254	0.61	1/1698 (0.1%)
1	E	0.39	0/1254	0.77	3/1698 (0.2%)
1	F	0.39	0/1254	0.60	0/1698
1	G	0.32	0/1254	0.57	1/1698 (0.1%)
1	H	0.34	0/1254	0.56	0/1698
1	I	0.34	0/1254	0.58	0/1698
1	J	0.33	0/1254	0.57	0/1698
1	K	0.33	0/1254	0.74	3/1698 (0.2%)
1	L	0.32	0/1254	0.57	0/1698
All	All	0.36	0/15048	0.63	12/20376 (0.1%)

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	55	ARG	NE-CZ-NH1	14.28	127.44	120.30
1	E	55	ARG	NE-CZ-NH2	-14.28	113.16	120.30
1	K	55	ARG	NE-CZ-NH2	-14.11	113.25	120.30
1	B	55	ARG	NE-CZ-NH2	-14.11	113.25	120.30
1	B	55	ARG	NE-CZ-NH1	13.52	127.06	120.30
1	K	55	ARG	NE-CZ-NH1	13.40	127.00	120.30
1	E	55	ARG	CD-NE-CZ	6.57	132.79	123.60
1	B	55	ARG	CD-NE-CZ	6.51	132.71	123.60
1	K	55	ARG	CD-NE-CZ	6.35	132.49	123.60
1	D	55	ARG	NE-CZ-NH1	-5.29	117.65	120.30
1	A	55	ARG	NE-CZ-NH1	-5.28	117.66	120.30
1	G	55	ARG	NE-CZ-NH1	-5.03	117.79	120.30

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	1236	0	1232	60	0
1	B	1236	0	1232	68	0
1	C	1236	0	1232	52	0
1	D	1236	0	1232	55	0
1	E	1236	0	1232	72	0
1	F	1236	0	1232	73	0
1	G	1236	0	1232	68	0
1	H	1236	0	1232	70	0
1	I	1236	0	1232	69	0
1	J	1236	0	1232	69	0
1	K	1236	0	1232	58	0
1	L	1236	0	1232	47	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
2	E	1	0	0	0	0
2	F	1	0	0	0	0
2	G	1	0	0	0	0
2	H	1	0	0	0	0
2	I	1	0	0	0	0
2	J	1	0	0	0	0
2	K	1	0	0	0	0
2	L	1	0	0	0	0
3	A	16	0	24	3	0
3	C	8	0	12	0	0
3	D	8	0	12	2	0
3	E	8	0	12	3	0
3	F	8	0	12	1	0
3	I	8	0	12	0	0
3	J	16	0	24	1	0
3	K	8	0	12	0	0
3	L	16	0	24	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	57	0	0	3	0
4	B	61	0	0	6	0
4	C	68	0	0	3	0
4	D	70	0	0	3	0
4	E	73	0	0	6	0
4	F	88	0	0	8	0
4	G	17	0	0	3	0
4	H	13	0	0	1	0
4	I	28	0	0	3	0
4	J	25	0	0	0	0
4	K	25	0	0	2	0
4	L	14	0	0	2	0
All	All	15479	0	14928	674	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 23.

All (674) 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:130:ASN:ND2	1:D:133:ARG:HH22	1.62	0.96
1:H:12:THR:HA	1:H:27:LYS:HD2	1.49	0.95
1:E:130:ASN:ND2	1:E:133:ARG:HH22	1.65	0.92
1:I:75:ASP:HB3	4:I:615:HOH:O	1.70	0.92
1:B:130:ASN:ND2	1:B:133:ARG:HH22	1.68	0.91
1:C:130:ASN:ND2	1:C:133:ARG:HH22	1.67	0.91
1:H:130:ASN:ND2	1:H:133:ARG:HH22	1.69	0.91
1:F:130:ASN:ND2	1:F:133:ARG:HH22	1.69	0.90
1:A:130:ASN:ND2	1:A:133:ARG:HH22	1.71	0.87
1:E:98:ILE:O	1:E:102:THR:HG22	1.75	0.86
1:G:41:ILE:HG12	1:G:77:LEU:HD11	1.55	0.86
1:G:130:ASN:ND2	1:G:133:ARG:HH22	1.71	0.86
1:C:130:ASN:HD22	1:C:133:ARG:HH22	1.23	0.86
1:K:130:ASN:ND2	1:K:133:ARG:HH22	1.74	0.85
1:L:41:ILE:HG12	1:L:77:LEU:HD11	1.57	0.85
1:J:130:ASN:ND2	1:J:133:ARG:HH22	1.72	0.85
1:L:130:ASN:ND2	1:L:133:ARG:HH22	1.74	0.85
1:H:130:ASN:HD22	1:H:133:ARG:HH22	1.23	0.84
1:E:130:ASN:HD22	1:E:133:ARG:HH22	1.23	0.84
1:K:41:ILE:HG12	1:K:77:LEU:HD11	1.60	0.83
1:J:41:ILE:HG12	1:J:77:LEU:HD11	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:146:ASP:OD1	3:E:603:TRS:H22	1.78	0.83
1:D:130:ASN:HD22	1:D:133:ARG:HH22	1.19	0.83
1:F:41:ILE:HG12	1:F:77:LEU:HD11	1.62	0.82
1:I:130:ASN:ND2	1:I:133:ARG:HH22	1.77	0.82
1:H:41:ILE:HG12	1:H:77:LEU:HD11	1.61	0.81
1:B:130:ASN:HD22	1:B:133:ARG:HH22	1.26	0.81
1:A:130:ASN:HD22	1:A:133:ARG:HH22	1.26	0.81
1:G:130:ASN:HD22	1:G:133:ARG:HH22	1.25	0.81
1:F:130:ASN:HD22	1:F:133:ARG:HH22	1.26	0.81
1:J:100:SER:O	1:J:101:LYS:HG2	1.81	0.81
1:E:41:ILE:HG12	1:E:77:LEU:HD11	1.62	0.80
1:I:41:ILE:HG12	1:I:77:LEU:HD11	1.64	0.80
1:C:41:ILE:HG12	1:C:77:LEU:HD11	1.63	0.80
1:D:41:ILE:HG12	1:D:77:LEU:HD11	1.63	0.79
1:B:41:ILE:HG12	1:B:77:LEU:HD11	1.63	0.79
1:F:113:ASN:ND2	1:F:115:GLN:HB2	1.98	0.79
1:J:130:ASN:HD22	1:J:133:ARG:HH22	1.28	0.79
1:B:21:VAL:O	1:B:26:LYS:HE3	1.83	0.79
1:A:41:ILE:HG12	1:A:77:LEU:HD11	1.64	0.78
1:H:113:ASN:ND2	1:H:115:GLN:HB2	1.99	0.78
1:J:113:ASN:ND2	1:J:115:GLN:HB2	1.99	0.78
1:L:13:ASN:O	1:L:14:LEU:HB2	1.83	0.78
1:K:130:ASN:HD22	1:K:133:ARG:HH22	1.31	0.77
1:I:130:ASN:HD22	1:I:133:ARG:HH22	1.33	0.77
1:L:130:ASN:HD22	1:L:133:ARG:HH22	1.28	0.77
1:C:21:VAL:O	1:C:26:LYS:HE3	1.84	0.77
1:D:113:ASN:ND2	1:D:115:GLN:HB2	2.00	0.77
1:L:113:ASN:ND2	1:L:115:GLN:HB2	1.98	0.77
1:B:113:ASN:ND2	1:B:115:GLN:HB2	1.99	0.77
1:I:113:ASN:ND2	1:I:115:GLN:HB2	2.01	0.76
1:F:21:VAL:O	1:F:26:LYS:HE3	1.86	0.76
1:G:21:VAL:O	1:G:26:LYS:HE3	1.85	0.76
1:E:21:VAL:O	1:E:26:LYS:HE3	1.86	0.75
1:G:113:ASN:ND2	1:G:115:GLN:HB2	2.00	0.75
1:C:113:ASN:ND2	1:C:115:GLN:HB2	2.01	0.75
1:A:113:ASN:ND2	1:A:115:GLN:HB2	2.01	0.75
1:F:113:ASN:HD21	1:F:115:GLN:HB2	1.52	0.75
1:I:70:ARG:HH11	1:J:74:ILE:HD13	1.51	0.74
1:E:113:ASN:ND2	1:E:115:GLN:HB2	2.01	0.74
1:K:113:ASN:ND2	1:K:115:GLN:HB2	2.01	0.74
1:K:21:VAL:O	1:K:26:LYS:HE3	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:12:THR:HA	1:H:27:LYS:CD	2.18	0.74
1:G:99:ASN:HB3	1:H:99:ASN:HD22	1.50	0.73
1:H:13:ASN:H	1:H:27:LYS:NZ	1.86	0.73
1:B:17:THR:HG22	4:B:257:HOH:O	1.89	0.73
1:G:130:ASN:CG	1:K:20:ASP:HB2	2.09	0.73
1:A:74:ILE:HD13	1:B:70:ARG:HH11	1.53	0.73
1:B:130:ASN:CG	1:C:20:ASP:HB2	2.09	0.73
1:D:115:GLN:HG2	4:D:496:HOH:O	1.89	0.72
1:L:113:ASN:HD21	1:L:115:GLN:HB2	1.54	0.72
1:J:21:VAL:O	1:J:26:LYS:HE3	1.89	0.72
1:E:113:ASN:HD21	1:E:115:GLN:HB2	1.55	0.72
1:A:21:VAL:O	1:A:26:LYS:HE3	1.90	0.71
1:L:21:VAL:O	1:L:26:LYS:HE3	1.89	0.71
1:C:130:ASN:ND2	1:E:20:ASP:H	1.87	0.71
1:D:113:ASN:HD21	1:D:115:GLN:HB2	1.55	0.71
1:A:70:ARG:HH11	1:B:74:ILE:HD13	1.54	0.71
1:G:70:ARG:HH11	1:H:74:ILE:HD13	1.56	0.71
1:H:113:ASN:HD21	1:H:115:GLN:HB2	1.56	0.71
1:D:18:ARG:HG3	1:D:18:ARG:HH21	1.56	0.71
1:D:21:VAL:O	1:D:26:LYS:HE3	1.90	0.71
1:H:133:ARG:HH11	1:H:133:ARG:HB2	1.56	0.70
1:I:21:VAL:O	1:I:26:LYS:HE3	1.91	0.70
1:H:21:VAL:O	1:H:26:LYS:HE3	1.92	0.70
1:I:113:ASN:HD21	1:I:115:GLN:HB2	1.56	0.70
1:F:133:ARG:HH11	1:F:133:ARG:HB2	1.57	0.70
1:K:113:ASN:HD21	1:K:115:GLN:HB2	1.56	0.70
1:J:113:ASN:HD21	1:J:115:GLN:HB2	1.55	0.70
1:G:97:VAL:O	1:G:101:LYS:HB2	1.91	0.70
1:B:113:ASN:HD21	1:B:115:GLN:HB2	1.57	0.69
1:I:74:ILE:HD13	1:J:70:ARG:HH11	1.57	0.69
1:J:133:ARG:HB2	1:J:133:ARG:HH11	1.55	0.69
1:A:113:ASN:HD21	1:A:115:GLN:HB2	1.58	0.69
1:D:130:ASN:CG	1:F:20:ASP:HB2	2.13	0.69
1:C:130:ASN:CG	1:E:20:ASP:HB2	2.14	0.69
1:G:74:ILE:HD13	1:H:70:ARG:HH11	1.58	0.68
1:G:113:ASN:HD21	1:G:115:GLN:HB2	1.56	0.68
1:H:12:THR:CA	1:H:27:LYS:HD2	2.23	0.68
1:L:133:ARG:HH11	1:L:133:ARG:HB2	1.57	0.68
1:C:113:ASN:HD21	1:C:115:GLN:HB2	1.56	0.68
1:A:18:ARG:HH21	1:A:18:ARG:HG3	1.57	0.68
1:G:133:ARG:HH11	1:G:133:ARG:HB2	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:33:LEU:HD21	1:H:144:THR:HG23	1.76	0.67
1:B:18:ARG:HH21	1:B:18:ARG:HG3	1.60	0.67
1:D:12:THR:O	1:D:27:LYS:NZ	2.28	0.67
1:K:18:ARG:HH21	1:K:18:ARG:HG3	1.60	0.67
1:A:133:ARG:HB2	1:A:133:ARG:HH11	1.58	0.66
1:B:98:ILE:O	1:B:102:THR:HG22	1.95	0.66
1:D:133:ARG:HH11	1:D:133:ARG:HB2	1.60	0.66
1:F:57:ALA:HB3	4:F:191:HOH:O	1.96	0.66
1:J:18:ARG:HH21	1:J:18:ARG:HG3	1.61	0.66
1:E:133:ARG:HH11	1:E:133:ARG:HB2	1.59	0.66
1:G:130:ASN:ND2	1:K:20:ASP:H	1.94	0.66
1:K:133:ARG:HH11	1:K:133:ARG:HB2	1.60	0.66
1:G:12:THR:C	1:G:13:ASN:HD22	1.98	0.65
1:I:18:ARG:HG3	1:I:18:ARG:HH21	1.60	0.65
1:B:20:ASP:HB2	1:E:130:ASN:CG	2.16	0.65
1:F:35:ARG:NH1	4:F:435:HOH:O	2.29	0.65
1:D:130:ASN:ND2	1:F:20:ASP:H	1.93	0.65
1:K:14:LEU:HD21	1:K:27:LYS:HG2	1.79	0.65
1:H:18:ARG:HH21	1:H:18:ARG:HG3	1.61	0.64
1:E:70:ARG:HH11	1:F:74:ILE:HD13	1.62	0.64
1:I:133:ARG:HH11	1:I:133:ARG:HB2	1.62	0.64
1:D:51:HIS:CE1	1:D:63:HIS:CE1	2.86	0.64
1:C:18:ARG:HH21	1:C:18:ARG:HG3	1.63	0.64
1:F:12:THR:N	4:F:500:HOH:O	2.30	0.64
1:L:18:ARG:HH21	1:L:18:ARG:HG3	1.61	0.63
1:I:20:ASP:H	1:K:130:ASN:ND2	1.96	0.63
1:G:14:LEU:HD11	1:G:27:LYS:HG3	1.79	0.63
1:G:18:ARG:HH21	1:G:18:ARG:HG3	1.64	0.63
1:I:20:ASP:HB2	1:K:130:ASN:CG	2.19	0.62
1:J:20:ASP:H	1:L:130:ASN:ND2	1.97	0.62
1:F:33:LEU:HD21	1:F:144:THR:HG23	1.81	0.62
1:C:133:ARG:HH11	1:C:133:ARG:HB2	1.63	0.62
1:D:130:ASN:ND2	1:D:133:ARG:NH2	2.42	0.62
1:G:33:LEU:HD21	1:G:144:THR:HG23	1.80	0.62
1:E:74:ILE:HD13	1:F:70:ARG:HH11	1.65	0.62
1:L:33:LEU:HD21	1:L:144:THR:HG23	1.80	0.62
1:B:130:ASN:ND2	1:C:20:ASP:HB2	2.16	0.61
1:B:133:ARG:HB2	1:B:133:ARG:HH11	1.64	0.61
1:H:14:LEU:HD21	1:H:27:LYS:HG2	1.82	0.61
1:A:15:LEU:HD13	1:A:88:GLY:O	2.01	0.61
1:E:18:ARG:HH21	1:E:18:ARG:HG3	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:26:LYS:O	1:C:30:VAL:HG23	2.01	0.61
1:H:133:ARG:HB2	1:H:133:ARG:NH1	2.16	0.60
1:J:133:ARG:HB2	1:J:133:ARG:NH1	2.15	0.60
1:B:130:ASN:ND2	1:C:20:ASP:H	1.98	0.60
1:A:133:ARG:HB2	1:A:133:ARG:NH1	2.16	0.60
1:C:57:ALA:HB3	4:C:634:HOH:O	2.00	0.60
1:C:130:ASN:ND2	1:C:133:ARG:NH2	2.46	0.60
1:E:70:ARG:HD3	4:E:648:HOH:O	2.02	0.60
1:J:20:ASP:HB2	1:L:130:ASN:CG	2.22	0.60
1:L:133:ARG:HB2	1:L:133:ARG:NH1	2.17	0.60
1:B:33:LEU:HD21	1:B:144:THR:HG23	1.82	0.60
1:K:133:ARG:HB2	1:K:133:ARG:NH1	2.16	0.60
1:C:130:ASN:HD21	1:E:20:ASP:H	1.50	0.59
3:A:601:TRS:H31	1:D:167:GLU:OE1	2.03	0.59
1:E:74:ILE:HD12	4:E:643:HOH:O	2.02	0.59
1:I:33:LEU:HD21	1:I:144:THR:HG23	1.85	0.59
1:I:142:ASP:HB2	4:I:626:HOH:O	2.03	0.59
1:C:12:THR:O	1:C:13:ASN:HB2	2.02	0.59
1:F:18:ARG:HH21	1:F:18:ARG:HG3	1.67	0.59
1:C:153:ARG:HG3	4:C:648:HOH:O	2.03	0.59
1:G:55:ARG:HD3	4:G:204:HOH:O	2.02	0.59
1:J:33:LEU:HD21	1:J:144:THR:HG23	1.84	0.59
1:F:133:ARG:HB2	1:F:133:ARG:NH1	2.17	0.58
1:J:97:VAL:O	1:J:101:LYS:HB2	2.04	0.58
1:F:90:VAL:HG22	4:F:455:HOH:O	2.03	0.58
1:K:100:SER:O	1:K:101:LYS:HG2	2.04	0.58
1:D:33:LEU:HD21	1:D:144:THR:HG23	1.85	0.58
1:F:130:ASN:ND2	1:F:133:ARG:NH2	2.49	0.58
1:L:26:LYS:O	1:L:30:VAL:HG23	2.04	0.57
1:A:51:HIS:CE1	1:A:63:HIS:CE1	2.92	0.57
1:K:33:LEU:HD21	1:K:144:THR:HG23	1.86	0.57
1:C:133:ARG:HB2	1:C:133:ARG:NH1	2.19	0.57
1:F:12:THR:CG2	1:F:27:LYS:HD2	2.34	0.57
1:A:33:LEU:HD21	1:A:144:THR:HG23	1.87	0.57
1:A:74:ILE:CD1	1:B:70:ARG:HH11	2.17	0.57
1:B:130:ASN:ND2	1:B:133:ARG:NH2	2.47	0.57
1:D:133:ARG:HB2	1:D:133:ARG:NH1	2.18	0.57
1:B:130:ASN:HD21	1:C:20:ASP:H	1.51	0.57
1:E:51:HIS:CE1	1:E:63:HIS:CE1	2.92	0.57
1:E:33:LEU:HD21	1:E:144:THR:HG23	1.87	0.56
1:B:20:ASP:H	1:E:130:ASN:ND2	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:165:ASN:HD21	1:E:60:ILE:H	1.53	0.56
1:G:133:ARG:HB2	1:G:133:ARG:NH1	2.19	0.56
1:E:133:ARG:HB2	1:E:133:ARG:NH1	2.20	0.56
1:F:153:ARG:HG3	4:F:360:HOH:O	2.06	0.56
1:H:13:ASN:H	1:H:27:LYS:HZ2	1.52	0.55
1:I:70:ARG:HH11	1:J:74:ILE:CD1	2.18	0.55
1:K:26:LYS:O	1:K:30:VAL:HG23	2.06	0.55
1:B:112:HIS:HB2	4:B:226:HOH:O	2.05	0.55
1:G:51:HIS:CE1	1:G:63:HIS:CE1	2.94	0.55
1:I:133:ARG:HB2	1:I:133:ARG:NH1	2.21	0.55
1:L:13:ASN:O	1:L:14:LEU:CB	2.53	0.55
1:C:130:ASN:HD22	1:C:133:ARG:NH2	2.01	0.55
1:H:51:HIS:CE1	1:H:63:HIS:CE1	2.94	0.55
1:L:134:LYS:HA	4:L:617:HOH:O	2.07	0.55
1:G:99:ASN:CB	1:H:99:ASN:HD22	2.20	0.55
1:I:26:LYS:O	1:I:30:VAL:HG23	2.07	0.55
1:B:153:ARG:HG3	4:B:205:HOH:O	2.07	0.55
1:J:51:HIS:CE1	1:J:63:HIS:CE1	2.95	0.54
1:C:35:ARG:HH21	1:C:35:ARG:HG3	1.72	0.54
1:G:26:LYS:O	1:G:30:VAL:HG23	2.08	0.54
1:A:18:ARG:HG3	1:A:18:ARG:NH2	2.23	0.54
1:C:33:LEU:HD21	1:C:144:THR:HG23	1.88	0.54
1:A:74:ILE:HD12	4:A:611:HOH:O	2.08	0.54
1:L:51:HIS:CE1	1:L:63:HIS:CE1	2.96	0.54
3:D:606:TRS:H32	1:F:146:ASP:OD1	2.07	0.54
1:G:15:LEU:HD21	1:H:112:HIS:CE1	2.43	0.54
1:J:43:LEU:HD11	1:J:125:TYR:CD1	2.42	0.54
1:B:133:ARG:HB2	1:B:133:ARG:NH1	2.23	0.53
1:I:158:PHE:O	1:I:162:ILE:HG13	2.09	0.53
1:F:142:ASP:HB2	4:F:490:HOH:O	2.08	0.53
1:G:130:ASN:HD21	1:K:20:ASP:H	1.55	0.53
1:H:15:LEU:HD13	1:H:88:GLY:O	2.07	0.53
1:I:55:ARG:O	1:I:114:VAL:HG23	2.07	0.53
1:H:32:LEU:HD12	4:H:209:HOH:O	2.07	0.53
1:C:51:HIS:CE1	1:C:63:HIS:CE1	2.97	0.53
1:G:130:ASN:ND2	1:K:20:ASP:HB2	2.24	0.53
1:H:37:VAL:O	1:H:41:ILE:HG13	2.09	0.53
1:I:109:LEU:HD13	1:J:92:LEU:HD22	1.90	0.53
1:L:38:ILE:HG23	1:L:98:ILE:HD13	1.90	0.53
1:F:15:LEU:HD13	1:F:88:GLY:O	2.07	0.53
1:J:35:ARG:HH21	1:J:35:ARG:HG3	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:51:HIS:CE1	1:B:63:HIS:CE1	2.97	0.53
1:C:130:ASN:ND2	1:E:20:ASP:HB2	2.22	0.53
1:K:51:HIS:CE1	1:K:63:HIS:CE1	2.96	0.53
1:G:21:VAL:HA	4:G:218:HOH:O	2.08	0.53
1:E:49:GLN:HG3	1:F:94:THR:CG2	2.39	0.53
1:F:37:VAL:O	1:F:41:ILE:HG13	2.09	0.53
1:L:55:ARG:O	1:L:114:VAL:HG23	2.09	0.53
1:F:35:ARG:HG3	1:F:35:ARG:HH21	1.74	0.52
1:J:26:LYS:O	1:J:30:VAL:HG23	2.09	0.52
1:J:20:ASP:H	1:L:130:ASN:HD21	1.56	0.52
1:E:94:THR:HB	4:E:636:HOH:O	2.09	0.52
1:I:74:ILE:CD1	1:J:70:ARG:HH11	2.21	0.52
1:A:70:ARG:HH11	1:B:74:ILE:CD1	2.22	0.52
1:D:130:ASN:HD21	1:F:20:ASP:H	1.57	0.52
1:L:101:LYS:O	1:L:103:PRO:HD3	2.09	0.52
1:H:35:ARG:HH21	1:H:35:ARG:HG3	1.73	0.52
1:H:55:ARG:O	1:H:114:VAL:HG23	2.09	0.52
1:H:60:ILE:HG23	1:H:61:ALA:N	2.25	0.52
1:E:130:ASN:ND2	1:E:133:ARG:NH2	2.46	0.52
1:J:15:LEU:HD13	1:J:88:GLY:O	2.09	0.52
1:L:111:ILE:HG13	1:L:117:HIS:CE1	2.45	0.52
1:G:35:ARG:HH21	1:G:35:ARG:HG3	1.75	0.52
1:K:15:LEU:HD13	1:K:88:GLY:O	2.09	0.52
1:F:51:HIS:CE1	1:F:63:HIS:CE1	2.97	0.52
1:G:15:LEU:HD13	1:G:88:GLY:O	2.10	0.52
1:G:38:ILE:HG23	1:G:98:ILE:HD13	1.92	0.52
1:B:18:ARG:HG3	1:B:18:ARG:NH2	2.25	0.51
1:D:26:LYS:O	1:D:30:VAL:HG23	2.10	0.51
1:D:106:SER:HA	4:D:523:HOH:O	2.08	0.51
1:H:58:ASN:ND2	1:H:61:ALA:HB3	2.25	0.51
1:I:15:LEU:HD13	1:I:88:GLY:O	2.11	0.51
1:I:51:HIS:CE1	1:I:63:HIS:CE1	2.97	0.51
1:I:94:THR:CG2	1:J:49:GLN:HG3	2.40	0.51
1:L:15:LEU:HD13	1:L:88:GLY:O	2.10	0.51
1:E:36:GLN:NE2	1:E:36:GLN:HA	2.26	0.51
1:F:26:LYS:O	1:F:30:VAL:HG23	2.10	0.51
1:K:111:ILE:HG13	1:K:117:HIS:CE1	2.45	0.51
1:H:26:LYS:O	1:H:30:VAL:HG23	2.10	0.51
1:K:18:ARG:HG3	1:K:18:ARG:NH2	2.25	0.51
1:E:43:LEU:HD11	1:E:125:TYR:CD1	2.46	0.51
1:J:20:ASP:HB2	1:L:130:ASN:ND2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:43:LEU:HD11	1:K:125:TYR:CD1	2.46	0.51
1:J:38:ILE:HG23	1:J:98:ILE:HD13	1.93	0.51
1:J:55:ARG:O	1:J:114:VAL:HG23	2.10	0.51
1:J:60:ILE:HG23	1:J:61:ALA:N	2.26	0.51
3:J:611:TRS:H31	1:K:167:GLU:OE1	2.11	0.51
1:K:77:LEU:C	1:K:77:LEU:HD23	2.31	0.51
1:A:94:THR:O	1:A:98:ILE:HG12	2.11	0.51
1:D:43:LEU:HD11	1:D:125:TYR:CD1	2.46	0.51
1:G:112:HIS:CE1	1:H:15:LEU:HD21	2.46	0.51
1:H:12:THR:HA	1:H:27:LYS:CE	2.41	0.51
1:A:26:LYS:O	1:A:30:VAL:HG23	2.11	0.51
1:D:15:LEU:HD13	1:D:88:GLY:O	2.11	0.51
1:G:37:VAL:O	1:G:41:ILE:HG13	2.11	0.51
1:G:43:LEU:HD11	1:G:125:TYR:CD1	2.45	0.51
1:G:55:ARG:O	1:G:114:VAL:HG23	2.11	0.51
1:G:60:ILE:HG23	1:G:61:ALA:N	2.26	0.51
1:K:37:VAL:O	1:K:41:ILE:HG13	2.10	0.51
1:F:12:THR:HB	1:F:27:LYS:HD2	1.93	0.51
1:A:94:THR:CG2	1:B:49:GLN:HG3	2.41	0.50
1:H:130:ASN:ND2	1:H:133:ARG:NH2	2.50	0.50
1:I:18:ARG:HG3	1:I:18:ARG:NH2	2.26	0.50
1:I:58:ASN:ND2	1:I:61:ALA:HB3	2.26	0.50
1:E:94:THR:CG2	1:F:49:GLN:HG3	2.40	0.50
1:E:57:ALA:HA	4:E:676:HOH:O	2.11	0.50
1:I:20:ASP:H	1:K:130:ASN:HD21	1.58	0.50
1:L:18:ARG:HG3	1:L:18:ARG:NH2	2.26	0.50
1:A:106:SER:HA	4:B:261:HOH:O	2.11	0.50
1:C:15:LEU:HD13	1:C:88:GLY:O	2.11	0.50
1:E:36:GLN:HA	1:E:36:GLN:HE21	1.77	0.50
1:J:18:ARG:HG3	1:J:18:ARG:NH2	2.25	0.50
1:H:99:ASN:O	1:H:102:THR:HG22	2.12	0.50
1:H:158:PHE:O	1:H:162:ILE:HG13	2.12	0.50
1:J:36:GLN:NE2	1:J:36:GLN:HA	2.27	0.50
1:B:20:ASP:HB2	1:E:130:ASN:ND2	2.27	0.50
1:K:153:ARG:NH1	4:K:632:HOH:O	2.45	0.50
1:E:94:THR:HG23	1:F:49:GLN:HG3	1.93	0.49
1:A:98:ILE:O	1:A:102:THR:HG22	2.12	0.49
1:A:167:GLU:OE1	3:A:601:TRS:H11	2.11	0.49
1:D:111:ILE:HG13	1:D:117:HIS:CE1	2.47	0.49
1:D:153:ARG:NH1	1:D:153:ARG:HG2	2.27	0.49
1:K:35:ARG:HH21	1:K:35:ARG:HG3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:36:GLN:HA	1:K:36:GLN:NE2	2.26	0.49
1:G:158:PHE:O	1:G:162:ILE:HG13	2.12	0.49
1:B:26:LYS:O	1:B:30:VAL:HG23	2.12	0.49
1:B:35:ARG:HH21	1:B:35:ARG:HG3	1.76	0.49
1:E:35:ARG:HH21	1:E:35:ARG:HG3	1.77	0.49
1:I:94:THR:HG23	1:J:49:GLN:HG3	1.93	0.49
1:L:35:ARG:HH21	1:L:35:ARG:HG3	1.76	0.49
1:L:37:VAL:O	1:L:41:ILE:HG13	2.13	0.49
1:B:153:ARG:NH1	1:B:153:ARG:HG2	2.27	0.49
1:H:18:ARG:HG3	1:H:18:ARG:NH2	2.27	0.49
1:H:38:ILE:HG23	1:H:98:ILE:HD13	1.94	0.49
1:B:43:LEU:HD11	1:B:125:TYR:CD1	2.48	0.49
1:G:36:GLN:NE2	1:G:36:GLN:HA	2.28	0.49
1:H:36:GLN:NE2	1:H:36:GLN:HA	2.27	0.49
1:A:43:LEU:HD11	1:A:125:TYR:CD1	2.47	0.49
1:D:35:ARG:HH21	1:D:35:ARG:HG3	1.76	0.49
1:D:146:ASP:OD1	3:D:606:TRS:H12	2.13	0.49
1:J:111:ILE:HG13	1:J:117:HIS:CE1	2.47	0.49
1:C:12:THR:HB	1:C:27:LYS:NZ	2.28	0.49
1:C:18:ARG:HG3	1:C:18:ARG:NH2	2.27	0.49
1:D:36:GLN:HA	1:D:36:GLN:NE2	2.27	0.49
1:J:36:GLN:HA	1:J:36:GLN:HE21	1.77	0.49
1:A:158:PHE:O	1:A:162:ILE:HG13	2.12	0.49
1:B:94:THR:O	1:B:98:ILE:HG12	2.12	0.49
1:H:43:LEU:HD11	1:H:125:TYR:CD1	2.48	0.49
1:H:94:THR:O	1:H:98:ILE:HG12	2.13	0.49
1:I:60:ILE:HG23	1:I:61:ALA:N	2.28	0.49
1:G:99:ASN:HD22	1:H:96:GLN:HA	1.78	0.49
1:I:37:VAL:O	1:I:41:ILE:HG13	2.13	0.49
1:B:111:ILE:HG13	1:B:117:HIS:CE1	2.48	0.48
1:C:111:ILE:HG13	1:C:117:HIS:CE1	2.48	0.48
1:I:35:ARG:HH21	1:I:35:ARG:HG3	1.78	0.48
1:B:77:LEU:HD23	1:B:77:LEU:C	2.34	0.48
1:G:58:ASN:ND2	1:G:61:ALA:HB3	2.29	0.48
1:H:111:ILE:HG13	1:H:117:HIS:CE1	2.48	0.48
1:F:158:PHE:O	1:F:162:ILE:HG13	2.12	0.48
1:G:13:ASN:HD22	1:G:13:ASN:N	2.08	0.48
1:D:36:GLN:HA	1:D:36:GLN:HE21	1.78	0.48
1:E:15:LEU:HD13	1:E:88:GLY:O	2.13	0.48
1:F:43:LEU:HD11	1:F:125:TYR:CD1	2.49	0.48
1:G:99:ASN:ND2	1:H:96:GLN:HA	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:60:ILE:H	1:L:165:ASN:HD21	1.61	0.48
1:C:36:GLN:HA	1:C:36:GLN:NE2	2.29	0.48
1:D:15:LEU:N	1:D:15:LEU:HD12	2.28	0.48
1:G:36:GLN:HA	1:G:36:GLN:HE21	1.78	0.48
1:H:13:ASN:H	1:H:27:LYS:HZ3	1.59	0.48
1:C:58:ASN:ND2	1:C:61:ALA:HB3	2.29	0.48
1:H:83:ARG:NH2	1:H:143:ASP:HB2	2.27	0.48
1:K:38:ILE:HG23	1:K:98:ILE:HD13	1.95	0.48
1:A:14:LEU:HD11	1:A:27:LYS:HG3	1.95	0.48
1:A:130:ASN:ND2	1:A:133:ARG:NH2	2.51	0.48
1:B:120:GLU:O	1:B:124:ARG:HG2	2.14	0.48
1:G:70:ARG:HH11	1:H:74:ILE:CD1	2.25	0.48
1:I:112:HIS:CE1	1:J:15:LEU:HD21	2.48	0.48
1:L:60:ILE:HG23	1:L:61:ALA:N	2.29	0.48
1:A:55:ARG:O	1:A:114:VAL:HG23	2.13	0.48
1:D:133:ARG:HE	1:F:21:VAL:HG23	1.79	0.48
1:I:38:ILE:HG23	1:I:98:ILE:HD13	1.95	0.48
1:B:20:ASP:H	1:E:130:ASN:HD21	1.61	0.47
1:I:28:ALA:HB3	4:I:628:HOH:O	2.13	0.47
1:C:38:ILE:HG23	1:C:98:ILE:HD13	1.95	0.47
1:F:18:ARG:HG3	1:F:18:ARG:NH2	2.29	0.47
1:F:153:ARG:NH1	1:F:153:ARG:HG2	2.28	0.47
1:G:18:ARG:HG3	1:G:18:ARG:NH2	2.29	0.47
1:H:36:GLN:HA	1:H:36:GLN:HE21	1.79	0.47
1:B:36:GLN:HA	1:B:36:GLN:NE2	2.29	0.47
1:E:94:THR:O	1:E:98:ILE:HG12	2.14	0.47
1:E:60:ILE:HG23	1:E:61:ALA:N	2.29	0.47
1:I:43:LEU:HD11	1:I:125:TYR:CD1	2.49	0.47
1:I:111:ILE:HG13	1:I:117:HIS:CE1	2.49	0.47
1:J:17:THR:C	1:J:19:ASN:H	2.18	0.47
1:B:17:THR:C	1:B:19:ASN:H	2.18	0.47
1:E:130:ASN:HD22	1:E:133:ARG:NH2	2.01	0.47
1:I:36:GLN:HA	1:I:36:GLN:HE21	1.79	0.47
1:A:35:ARG:HH21	1:A:35:ARG:HG3	1.78	0.47
1:B:153:ARG:HG2	1:B:153:ARG:HH11	1.80	0.47
1:C:153:ARG:NH1	1:C:153:ARG:HG2	2.30	0.47
1:D:113:ASN:HD21	1:D:115:GLN:CB	2.27	0.47
1:F:167:GLU:OE1	3:F:605:TRS:H21	2.14	0.47
1:J:94:THR:O	1:J:98:ILE:HG12	2.14	0.47
1:A:13:ASN:HD21	1:A:27:LYS:NZ	2.13	0.47
1:B:112:HIS:CB	4:B:226:HOH:O	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:124:ARG:HH21	1:E:124:ARG:HG3	1.80	0.47
1:L:102:THR:O	1:L:102:THR:HG23	2.15	0.47
1:C:43:LEU:HD11	1:C:125:TYR:CD1	2.50	0.47
1:G:120:GLU:O	1:G:124:ARG:HG2	2.14	0.47
1:I:42:ASP:OD1	1:J:95:THR:HB	2.14	0.47
1:L:43:LEU:HD11	1:L:125:TYR:CD1	2.50	0.47
1:A:165:ASN:HD21	1:D:60:ILE:H	1.62	0.46
1:B:15:LEU:HD13	1:B:88:GLY:O	2.15	0.46
1:B:104:LEU:HA	4:B:216:HOH:O	2.14	0.46
1:D:153:ARG:HG3	4:D:461:HOH:O	2.14	0.46
1:E:49:GLN:HG3	1:F:94:THR:HG23	1.97	0.46
1:J:83:ARG:NH2	1:J:143:ASP:HB2	2.29	0.46
1:K:54:MET:C	1:K:55:ARG:HG3	2.35	0.46
1:K:158:PHE:O	1:K:162:ILE:HG13	2.14	0.46
1:F:60:ILE:HG23	1:F:61:ALA:N	2.31	0.46
1:K:74:ILE:HD12	4:K:619:HOH:O	2.14	0.46
1:A:60:ILE:HG23	1:A:61:ALA:N	2.29	0.46
1:D:105:LYS:O	1:D:106:SER:C	2.53	0.46
1:G:77:LEU:HD23	1:G:77:LEU:C	2.35	0.46
1:L:36:GLN:HA	1:L:36:GLN:NE2	2.29	0.46
1:C:14:LEU:HD21	1:C:27:LYS:HG2	1.97	0.46
1:C:17:THR:C	1:C:19:ASN:H	2.19	0.46
1:G:17:THR:C	1:G:19:ASN:H	2.18	0.46
1:I:36:GLN:HA	1:I:36:GLN:NE2	2.31	0.46
1:K:60:ILE:HG23	1:K:61:ALA:N	2.31	0.46
1:B:55:ARG:O	1:B:114:VAL:HG23	2.15	0.46
1:E:109:LEU:HD21	4:E:656:HOH:O	2.16	0.46
1:F:94:THR:O	1:F:98:ILE:HG12	2.15	0.46
1:G:74:ILE:CD1	1:H:70:ARG:HH11	2.27	0.46
1:H:58:ASN:HD21	1:H:61:ALA:HB3	1.79	0.46
1:I:49:GLN:HG3	1:J:94:THR:CG2	2.44	0.46
1:A:77:LEU:C	1:A:77:LEU:HD23	2.35	0.46
1:E:15:LEU:HD12	1:E:15:LEU:N	2.31	0.46
1:K:17:THR:C	1:K:19:ASN:H	2.19	0.46
1:D:77:LEU:HD23	1:D:77:LEU:C	2.36	0.46
1:J:13:ASN:N	1:J:13:ASN:HD22	2.13	0.46
1:A:36:GLN:HA	1:A:36:GLN:NE2	2.30	0.46
1:B:130:ASN:HD22	1:B:133:ARG:NH2	2.03	0.46
1:D:60:ILE:HG23	1:D:61:ALA:N	2.30	0.46
1:E:13:ASN:O	1:E:14:LEU:C	2.55	0.46
1:H:39:GLN:CG	1:H:128:VAL:HG22	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:15:LEU:HD12	1:J:15:LEU:N	2.31	0.46
1:B:36:GLN:HA	1:B:36:GLN:HE21	1.80	0.46
1:B:54:MET:C	1:B:55:ARG:HG3	2.36	0.46
1:F:36:GLN:HA	1:F:36:GLN:NE2	2.31	0.46
1:H:153:ARG:HG2	1:H:153:ARG:NH1	2.30	0.46
1:I:17:THR:C	1:I:19:ASN:H	2.19	0.46
1:I:120:GLU:O	1:I:124:ARG:HG2	2.16	0.46
1:A:39:GLN:CG	1:A:128:VAL:HG22	2.46	0.45
1:C:46:ILE:HG23	1:C:107:TYR:CD2	2.51	0.45
1:C:77:LEU:C	1:C:77:LEU:HD23	2.37	0.45
1:C:120:GLU:O	1:C:124:ARG:HG2	2.16	0.45
1:D:153:ARG:HG2	1:D:153:ARG:HH11	1.80	0.45
1:F:113:ASN:HD21	1:F:115:GLN:CB	2.25	0.45
1:K:55:ARG:O	1:K:114:VAL:HG23	2.15	0.45
1:D:18:ARG:HG3	1:D:18:ARG:NH2	2.25	0.45
1:H:40:PHE:CZ	1:H:155:LEU:HD11	2.51	0.45
1:C:133:ARG:HE	1:E:21:VAL:HG23	1.80	0.45
1:D:130:ASN:HD22	1:D:133:ARG:NH2	1.99	0.45
1:I:49:GLN:HG3	1:J:94:THR:HG23	1.97	0.45
1:K:36:GLN:HA	1:K:36:GLN:HE21	1.80	0.45
1:B:37:VAL:O	1:B:41:ILE:HG13	2.16	0.45
1:K:120:GLU:O	1:K:124:ARG:HG2	2.16	0.45
1:B:158:PHE:O	1:B:162:ILE:HG13	2.17	0.45
1:F:36:GLN:HA	1:F:36:GLN:HE21	1.81	0.45
1:F:105:LYS:O	1:F:106:SER:C	2.55	0.45
1:H:133:ARG:NH1	1:H:133:ARG:CB	2.79	0.45
1:I:98:ILE:O	1:I:102:THR:HG22	2.16	0.45
1:K:130:ASN:ND2	1:K:133:ARG:NH2	2.54	0.45
1:E:153:ARG:NH1	1:E:153:ARG:HG2	2.31	0.45
1:G:83:ARG:NH2	1:G:143:ASP:HB2	2.31	0.45
1:A:39:GLN:HG2	1:A:128:VAL:HG22	1.99	0.45
1:A:49:GLN:HG3	1:B:94:THR:CG2	2.46	0.45
1:E:54:MET:C	1:E:55:ARG:HG3	2.37	0.45
1:I:20:ASP:HB2	1:K:130:ASN:ND2	2.31	0.45
1:K:46:ILE:HG23	1:K:107:TYR:CD2	2.51	0.45
1:L:77:LEU:C	1:L:77:LEU:HD23	2.36	0.45
1:B:83:ARG:NH2	1:B:143:ASP:HB2	2.32	0.45
1:C:94:THR:O	1:C:98:ILE:HG12	2.17	0.45
1:F:111:ILE:HG13	1:F:117:HIS:CE1	2.52	0.45
1:J:130:ASN:ND2	1:J:133:ARG:NH2	2.52	0.45
1:C:58:ASN:HD21	1:C:61:ALA:HB3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:18:ARG:HG3	1:E:18:ARG:NH2	2.30	0.45
1:G:105:LYS:O	1:G:106:SER:C	2.55	0.45
1:G:130:ASN:ND2	1:G:133:ARG:NH2	2.51	0.45
1:H:77:LEU:C	1:H:77:LEU:HD23	2.37	0.45
3:A:601:TRS:H31	1:D:167:GLU:CD	2.37	0.45
1:D:17:THR:C	1:D:19:ASN:H	2.19	0.45
1:E:70:ARG:HH11	1:F:74:ILE:CD1	2.29	0.45
1:H:17:THR:C	1:H:19:ASN:H	2.19	0.45
1:L:36:GLN:HA	1:L:36:GLN:HE21	1.81	0.45
1:L:158:PHE:O	1:L:162:ILE:HG13	2.17	0.45
1:G:49:GLN:HG3	1:H:94:THR:CG2	2.47	0.44
1:I:96:GLN:HG3	1:J:106:SER:OG	2.17	0.44
1:J:113:ASN:HD21	1:J:115:GLN:CB	2.27	0.44
1:K:83:ARG:NH2	1:K:143:ASP:HB2	2.31	0.44
1:L:58:ASN:ND2	1:L:61:ALA:HB3	2.32	0.44
1:A:94:THR:HG23	1:B:49:GLN:HG3	1.98	0.44
1:B:113:ASN:HD21	1:B:115:GLN:CB	2.27	0.44
1:D:130:ASN:ND2	1:F:20:ASP:HB2	2.31	0.44
1:F:39:GLN:HG2	1:F:128:VAL:HG22	1.98	0.44
1:F:83:ARG:NH2	1:F:143:ASP:HB2	2.32	0.44
1:F:120:GLU:O	1:F:124:ARG:HG2	2.17	0.44
1:G:153:ARG:NH1	1:G:153:ARG:HG2	2.33	0.44
1:I:58:ASN:HD21	1:I:61:ALA:HB3	1.82	0.44
1:L:113:ASN:HD21	1:L:115:GLN:CB	2.28	0.44
1:H:105:LYS:O	1:H:106:SER:C	2.55	0.44
1:I:105:LYS:O	1:I:106:SER:C	2.55	0.44
1:J:37:VAL:O	1:J:41:ILE:HG13	2.18	0.44
1:K:15:LEU:N	1:K:15:LEU:HD12	2.31	0.44
1:L:130:ASN:ND2	1:L:133:ARG:NH2	2.54	0.44
1:D:55:ARG:O	1:D:114:VAL:HG23	2.17	0.44
1:D:58:ASN:ND2	1:D:61:ALA:HB3	2.31	0.44
1:E:39:GLN:HG2	1:E:128:VAL:HG22	1.99	0.44
1:E:83:ARG:NH2	1:E:143:ASP:HB2	2.32	0.44
1:A:22:SER:HA	4:A:623:HOH:O	2.17	0.44
1:A:46:ILE:HG23	1:A:107:TYR:CD2	2.53	0.44
1:F:138:GLU:HG2	4:F:444:HOH:O	2.16	0.44
1:F:153:ARG:HG2	1:F:153:ARG:HH11	1.82	0.44
1:J:12:THR:CB	1:J:27:LYS:HZ3	2.29	0.44
1:J:58:ASN:ND2	1:J:61:ALA:HB3	2.33	0.44
1:A:83:ARG:NH2	1:A:143:ASP:HB2	2.33	0.44
1:D:37:VAL:O	1:D:41:ILE:HG13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:77:LEU:C	1:J:77:LEU:HD23	2.37	0.44
1:J:158:PHE:O	1:J:162:ILE:HG13	2.17	0.44
1:L:46:ILE:HG23	1:L:107:TYR:CD2	2.52	0.44
1:C:34:ASN:O	1:C:38:ILE:HG13	2.18	0.44
1:E:111:ILE:HG13	1:E:117:HIS:CE1	2.53	0.44
1:I:15:LEU:HD21	1:J:112:HIS:CE1	2.53	0.43
1:I:94:THR:O	1:I:98:ILE:HG12	2.18	0.43
1:J:83:ARG:NH2	1:J:141:ASP:OD1	2.44	0.43
1:B:111:ILE:HD13	1:B:120:GLU:HG3	2.00	0.43
1:G:92:LEU:HD22	1:H:109:LEU:HD13	2.00	0.43
1:J:120:GLU:O	1:J:124:ARG:HG2	2.18	0.43
1:A:40:PHE:CZ	1:A:155:LEU:HD11	2.53	0.43
1:E:120:GLU:O	1:E:124:ARG:HG2	2.18	0.43
1:F:12:THR:CB	1:F:27:LYS:HD2	2.49	0.43
1:F:12:THR:HG21	1:F:27:LYS:HD2	2.00	0.43
1:H:39:GLN:HG2	1:H:128:VAL:HG22	2.00	0.43
1:I:153:ARG:NH1	1:I:153:ARG:HG2	2.32	0.43
1:A:36:GLN:HA	1:A:36:GLN:HE21	1.82	0.43
1:G:20:ASP:H	1:I:130:ASN:ND2	2.16	0.43
1:G:58:ASN:HD21	1:G:61:ALA:HB3	1.84	0.43
1:K:58:ASN:ND2	1:K:61:ALA:HB3	2.34	0.43
1:A:15:LEU:N	1:A:15:LEU:HD12	2.33	0.43
1:E:15:LEU:HD21	1:F:112:HIS:CE1	2.54	0.43
1:E:17:THR:C	1:E:19:ASN:H	2.22	0.43
1:E:55:ARG:NH1	1:F:15:LEU:HD22	2.34	0.43
1:H:12:THR:HG21	1:H:23:ASP:HB3	2.00	0.43
1:I:92:LEU:HD22	1:J:109:LEU:HD13	2.00	0.43
1:C:124:ARG:HH21	1:C:124:ARG:HG3	1.83	0.43
1:F:55:ARG:O	1:F:114:VAL:HG23	2.18	0.43
1:G:12:THR:OG1	1:G:27:LYS:HD2	2.18	0.43
1:J:153:ARG:NH1	1:J:153:ARG:HG2	2.33	0.43
1:A:26:LYS:HD3	1:A:87:LEU:O	2.19	0.43
1:B:13:ASN:HD22	1:B:13:ASN:HA	1.60	0.43
1:C:109:LEU:HD21	4:C:608:HOH:O	2.17	0.43
1:G:40:PHE:CZ	1:G:155:LEU:HD11	2.53	0.43
1:G:99:ASN:C	1:G:101:LYS:H	2.22	0.43
1:G:111:ILE:HG13	1:G:117:HIS:CE1	2.53	0.43
1:A:111:ILE:HG13	1:A:117:HIS:CE1	2.53	0.43
1:A:130:ASN:HD22	1:A:133:ARG:NH2	2.05	0.43
1:B:46:ILE:HG23	1:B:107:TYR:CD2	2.53	0.43
1:B:60:ILE:HG23	1:B:61:ALA:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:46:ILE:HG23	1:J:107:TYR:CD2	2.53	0.43
1:K:113:ASN:HD21	1:K:115:GLN:CB	2.29	0.43
1:L:133:ARG:NH1	1:L:133:ARG:CB	2.82	0.43
1:C:165:ASN:HD21	1:F:60:ILE:H	1.67	0.43
1:G:49:GLN:HG3	1:H:94:THR:HG23	2.01	0.43
1:G:113:ASN:HD21	1:G:115:GLN:CB	2.28	0.43
1:G:153:ARG:HD2	1:K:147:ILE:HG13	1.99	0.43
1:F:39:GLN:CG	1:F:128:VAL:HG22	2.49	0.42
4:G:216:HOH:O	1:I:166:ILE:HD12	2.18	0.42
1:A:153:ARG:NH1	4:A:650:HOH:O	2.52	0.42
1:E:26:LYS:O	1:E:30:VAL:HG23	2.18	0.42
1:F:15:LEU:N	1:F:15:LEU:HD12	2.33	0.42
1:F:104:LEU:HA	4:F:314:HOH:O	2.19	0.42
1:G:39:GLN:CG	1:G:128:VAL:HG22	2.49	0.42
1:H:120:GLU:O	1:H:124:ARG:HG2	2.18	0.42
1:F:58:ASN:ND2	1:F:61:ALA:HB3	2.35	0.42
1:H:124:ARG:HH21	1:H:124:ARG:HG3	1.84	0.42
1:I:39:GLN:HG2	1:I:128:VAL:HG22	2.01	0.42
1:E:58:ASN:ND2	1:E:61:ALA:HB3	2.34	0.42
1:H:12:THR:CB	1:H:27:LYS:HD2	2.49	0.42
1:I:77:LEU:HD23	1:I:77:LEU:C	2.39	0.42
1:J:130:ASN:HD22	1:J:133:ARG:NH2	2.07	0.42
1:E:35:ARG:HG2	4:E:625:HOH:O	2.20	0.42
1:H:46:ILE:HG23	1:H:107:TYR:CD2	2.55	0.42
1:B:39:GLN:CG	1:B:128:VAL:HG22	2.49	0.42
1:D:58:ASN:HD21	1:D:61:ALA:HB3	1.84	0.42
1:D:124:ARG:HH21	1:D:124:ARG:HG3	1.85	0.42
1:E:83:ARG:NH2	1:E:141:ASP:OD1	2.45	0.42
1:J:39:GLN:HG2	1:J:128:VAL:HG22	2.02	0.42
1:K:153:ARG:NH1	1:K:153:ARG:HG2	2.33	0.42
1:A:113:ASN:HD21	1:A:115:GLN:CB	2.31	0.42
1:I:95:THR:HB	1:J:42:ASP:OD1	2.19	0.42
1:I:153:ARG:HG2	1:I:153:ARG:HH11	1.85	0.42
1:B:38:ILE:HG23	1:B:98:ILE:HD13	2.01	0.42
1:E:40:PHE:CZ	1:E:155:LEU:HD11	2.55	0.42
1:A:13:ASN:HD21	1:A:27:LYS:HZ1	1.66	0.42
1:G:94:THR:O	1:G:98:ILE:HG12	2.20	0.42
1:H:111:ILE:HD13	1:H:120:GLU:HG3	2.02	0.42
1:I:39:GLN:CG	1:I:128:VAL:HG22	2.50	0.42
1:J:133:ARG:NH1	1:J:133:ARG:CB	2.81	0.42
1:K:133:ARG:NH1	1:K:133:ARG:CB	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:120:GLU:O	1:A:124:ARG:HG2	2.20	0.42
1:B:40:PHE:CZ	1:B:155:LEU:HD11	2.55	0.42
1:L:17:THR:C	1:L:19:ASN:H	2.21	0.42
1:A:17:THR:C	1:A:19:ASN:H	2.23	0.41
1:C:55:ARG:O	1:C:114:VAL:HG23	2.20	0.41
1:E:55:ARG:O	1:E:114:VAL:HG23	2.20	0.41
1:E:77:LEU:HD23	1:E:77:LEU:C	2.41	0.41
1:G:124:ARG:HG3	1:G:124:ARG:HH21	1.85	0.41
1:J:40:PHE:CZ	1:J:155:LEU:HD11	2.55	0.41
1:K:21:VAL:HG12	1:K:26:LYS:HG3	2.02	0.41
1:A:37:VAL:O	1:A:41:ILE:HG13	2.20	0.41
1:E:146:ASP:OD1	3:E:603:TRS:H31	2.21	0.41
1:F:133:ARG:NH1	1:F:133:ARG:CB	2.82	0.41
1:H:118:LEU:HD12	1:H:118:LEU:HA	1.91	0.41
1:J:39:GLN:CG	1:J:128:VAL:HG22	2.51	0.41
1:L:120:GLU:O	1:L:124:ARG:HG2	2.21	0.41
1:L:124:ARG:HG3	1:L:124:ARG:HH21	1.85	0.41
1:C:153:ARG:HG2	1:C:153:ARG:HH11	1.86	0.41
1:E:105:LYS:O	1:E:106:SER:C	2.58	0.41
1:F:13:ASN:HD22	1:F:13:ASN:HA	1.56	0.41
1:I:124:ARG:HH21	1:I:124:ARG:HG3	1.86	0.41
1:J:60:ILE:CG2	1:J:61:ALA:N	2.84	0.41
1:L:102:THR:C	1:L:104:LEU:H	2.23	0.41
1:A:133:ARG:NH1	1:A:133:ARG:CB	2.82	0.41
1:C:83:ARG:NH2	1:C:143:ASP:HB2	2.35	0.41
1:F:38:ILE:HG23	1:F:98:ILE:HD13	2.02	0.41
1:I:40:PHE:CZ	1:I:155:LEU:HD11	2.54	0.41
1:I:60:ILE:HG22	4:L:621:HOH:O	2.20	0.41
1:B:105:LYS:O	1:B:106:SER:C	2.59	0.41
1:I:14:LEU:HD11	1:I:27:LYS:HG3	2.03	0.41
1:A:60:ILE:H	1:E:165:ASN:HD21	1.67	0.41
1:A:112:HIS:CE1	1:B:15:LEU:HD21	2.56	0.41
1:B:153:ARG:HH11	1:B:153:ARG:CG	2.34	0.41
1:C:36:GLN:HA	1:C:36:GLN:HE21	1.84	0.41
1:E:74:ILE:CD1	1:F:70:ARG:HH11	2.30	0.41
1:K:13:ASN:O	1:K:14:LEU:HD23	2.21	0.41
1:K:94:THR:O	1:K:98:ILE:HG12	2.21	0.41
1:L:94:THR:O	1:L:98:ILE:HG12	2.20	0.41
1:D:20:ASP:O	1:D:21:VAL:C	2.59	0.41
1:F:34:ASN:O	1:F:38:ILE:HG13	2.21	0.41
1:H:153:ARG:HG2	1:H:153:ARG:HH11	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:34:ASN:O	1:B:38:ILE:HG13	2.20	0.41
1:D:38:ILE:HG23	1:D:98:ILE:HD13	2.03	0.41
1:D:133:ARG:NH1	1:D:133:ARG:CB	2.83	0.41
1:E:39:GLN:CG	1:E:128:VAL:HG22	2.51	0.41
1:E:58:ASN:HD21	1:E:61:ALA:HB3	1.86	0.41
1:E:146:ASP:OD2	3:E:603:TRS:H31	2.21	0.41
1:E:153:ARG:HG2	1:E:153:ARG:HH11	1.86	0.41
1:F:153:ARG:HH11	1:F:153:ARG:CG	2.34	0.41
1:I:73:LEU:HD12	1:I:73:LEU:HA	1.92	0.41
1:I:106:SER:OG	1:J:96:GLN:HG3	2.20	0.41
1:K:34:ASN:O	1:K:38:ILE:HG13	2.20	0.41
1:B:12:THR:O	1:B:27:LYS:NZ	2.54	0.41
1:D:83:ARG:NH2	1:D:143:ASP:HB2	2.36	0.41
1:K:111:ILE:HD13	1:K:120:GLU:HG3	2.02	0.41
1:A:153:ARG:NH1	1:A:153:ARG:HG2	2.35	0.40
1:B:39:GLN:HG2	1:B:128:VAL:HG22	2.03	0.40
1:B:73:LEU:HD12	1:B:73:LEU:HA	1.94	0.40
1:D:46:ILE:HG23	1:D:107:TYR:CD2	2.56	0.40
1:D:120:GLU:O	1:D:124:ARG:HG2	2.22	0.40
1:F:17:THR:C	1:F:19:ASN:H	2.23	0.40
1:G:99:ASN:O	1:G:100:SER:HB2	2.21	0.40
1:K:14:LEU:HD11	1:K:27:LYS:HG3	2.02	0.40
1:L:21:VAL:HG12	1:L:26:LYS:HG3	2.03	0.40
1:I:42:ASP:OD1	1:J:95:THR:CG2	2.69	0.40
1:L:153:ARG:HG2	1:L:153:ARG:NH1	2.36	0.40
1:H:29:THR:HG23	1:H:144:THR:HG21	2.03	0.40
1:H:113:ASN:HD21	1:H:115:GLN:CB	2.28	0.40
1:J:60:ILE:H	1:K:165:ASN:HD21	1.68	0.40
1:K:105:LYS:O	1:K:106:SER:C	2.59	0.40
1:F:130:ASN:HD22	1:F:133:ARG:NH2	2.05	0.40
1:G:60:ILE:CG2	1:G:61:ALA:N	2.84	0.40
1:G:133:ARG:NH1	1:G:133:ARG:CB	2.84	0.40
1:A:38:ILE:HG23	1:A:98:ILE:HD13	2.03	0.40
1:A:105:LYS:O	1:A:106:SER:C	2.59	0.40
1:D:153:ARG:HH11	1:D:153:ARG:CG	2.34	0.40
1:E:49:GLN:HG3	1:F:94:THR:HG22	2.04	0.40
1:I:130:ASN:ND2	1:I:133:ARG:NH2	2.57	0.40
1:J:124:ARG:HG3	1:J:124:ARG:HH21	1.86	0.40

There are no symmetry-related clashes.

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	154/167 (92%)	147 (96%)	5 (3%)	2 (1%)	12	33
1	B	154/167 (92%)	141 (92%)	11 (7%)	2 (1%)	12	33
1	C	154/167 (92%)	144 (94%)	8 (5%)	2 (1%)	12	33
1	D	154/167 (92%)	148 (96%)	4 (3%)	2 (1%)	12	33
1	E	154/167 (92%)	143 (93%)	8 (5%)	3 (2%)	8	24
1	F	154/167 (92%)	145 (94%)	7 (4%)	2 (1%)	12	33
1	G	154/167 (92%)	141 (92%)	11 (7%)	2 (1%)	12	33
1	H	154/167 (92%)	142 (92%)	8 (5%)	4 (3%)	5	17
1	I	154/167 (92%)	144 (94%)	9 (6%)	1 (1%)	25	53
1	J	154/167 (92%)	143 (93%)	9 (6%)	2 (1%)	12	33
1	K	154/167 (92%)	143 (93%)	9 (6%)	2 (1%)	12	33
1	L	154/167 (92%)	141 (92%)	11 (7%)	2 (1%)	12	33
All	All	1848/2004 (92%)	1722 (93%)	100 (5%)	26 (1%)	11	31

All (26) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	13	ASN
1	A	21	VAL
1	D	21	VAL
1	E	13	ASN
1	G	21	VAL
1	H	21	VAL
1	H	101	LYS
1	I	21	VAL
1	J	21	VAL
1	K	13	ASN
1	K	21	VAL
1	L	14	LEU

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Mol	Chain	Res	Type
1	L	21	VAL
1	B	21	VAL
1	C	21	VAL
1	E	14	LEU
1	E	21	VAL
1	F	21	VAL
1	G	14	LEU
1	H	100	SER
1	J	101	LYS
1	D	106	SER
1	F	106	SER
1	B	106	SER
1	C	13	ASN
1	H	106	SER

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	134/143 (94%)	125 (93%)	9 (7%)	16	39
1	B	134/143 (94%)	124 (92%)	10 (8%)	13	34
1	C	134/143 (94%)	126 (94%)	8 (6%)	19	45
1	D	134/143 (94%)	125 (93%)	9 (7%)	16	39
1	E	134/143 (94%)	125 (93%)	9 (7%)	16	39
1	F	134/143 (94%)	125 (93%)	9 (7%)	16	39
1	G	134/143 (94%)	124 (92%)	10 (8%)	13	34
1	H	134/143 (94%)	126 (94%)	8 (6%)	19	45
1	I	134/143 (94%)	124 (92%)	10 (8%)	13	34
1	J	134/143 (94%)	126 (94%)	8 (6%)	19	45
1	K	134/143 (94%)	125 (93%)	9 (7%)	16	39
1	L	134/143 (94%)	126 (94%)	8 (6%)	19	45
All	All	1608/1716 (94%)	1501 (93%)	107 (7%)	16	39

All (107) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	23	ASP
1	A	31	GLU
1	A	49	GLN
1	A	58	ASN
1	A	73	LEU
1	A	96	GLN
1	A	102	THR
1	A	118	LEU
1	A	153	ARG
1	B	13	ASN
1	B	23	ASP
1	B	31	GLU
1	B	49	GLN
1	B	58	ASN
1	B	73	LEU
1	B	96	GLN
1	B	102	THR
1	B	118	LEU
1	B	153	ARG
1	C	23	ASP
1	C	31	GLU
1	C	49	GLN
1	C	58	ASN
1	C	73	LEU
1	C	96	GLN
1	C	118	LEU
1	C	153	ARG
1	D	23	ASP
1	D	31	GLU
1	D	49	GLN
1	D	58	ASN
1	D	73	LEU
1	D	96	GLN
1	D	99	ASN
1	D	118	LEU
1	D	153	ARG
1	E	23	ASP
1	E	31	GLU
1	E	49	GLN
1	E	58	ASN
1	E	73	LEU
1	E	96	GLN

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Mol	Chain	Res	Type
1	E	102	THR
1	E	118	LEU
1	E	153	ARG
1	F	13	ASN
1	F	23	ASP
1	F	31	GLU
1	F	49	GLN
1	F	58	ASN
1	F	73	LEU
1	F	96	GLN
1	F	118	LEU
1	F	153	ARG
1	G	12	THR
1	G	23	ASP
1	G	31	GLU
1	G	49	GLN
1	G	58	ASN
1	G	73	LEU
1	G	96	GLN
1	G	102	THR
1	G	118	LEU
1	G	153	ARG
1	H	23	ASP
1	H	31	GLU
1	H	49	GLN
1	H	58	ASN
1	H	73	LEU
1	H	96	GLN
1	H	118	LEU
1	H	153	ARG
1	I	13	ASN
1	I	23	ASP
1	I	31	GLU
1	I	49	GLN
1	I	58	ASN
1	I	73	LEU
1	I	96	GLN
1	I	99	ASN
1	I	118	LEU
1	I	153	ARG
1	J	23	ASP
1	J	31	GLU

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Mol	Chain	Res	Type
1	J	49	GLN
1	J	58	ASN
1	J	73	LEU
1	J	96	GLN
1	J	118	LEU
1	J	153	ARG
1	K	23	ASP
1	K	31	GLU
1	K	49	GLN
1	K	58	ASN
1	K	73	LEU
1	K	96	GLN
1	K	99	ASN
1	K	118	LEU
1	K	153	ARG
1	L	23	ASP
1	L	31	GLU
1	L	49	GLN
1	L	58	ASN
1	L	73	LEU
1	L	96	GLN
1	L	118	LEU
1	L	153	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (107) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	13	ASN
1	A	36	GLN
1	A	39	GLN
1	A	58	ASN
1	A	96	GLN
1	A	112	HIS
1	A	113	ASN
1	A	130	ASN
1	A	165	ASN
1	B	13	ASN
1	B	36	GLN
1	B	39	GLN
1	B	58	ASN
1	B	96	GLN
1	B	99	ASN

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Mol	Chain	Res	Type
1	B	112	HIS
1	B	113	ASN
1	B	130	ASN
1	C	36	GLN
1	C	39	GLN
1	C	49	GLN
1	C	58	ASN
1	C	96	GLN
1	C	112	HIS
1	C	113	ASN
1	C	130	ASN
1	C	165	ASN
1	D	13	ASN
1	D	36	GLN
1	D	39	GLN
1	D	49	GLN
1	D	58	ASN
1	D	96	GLN
1	D	113	ASN
1	D	130	ASN
1	D	165	ASN
1	E	36	GLN
1	E	39	GLN
1	E	58	ASN
1	E	112	HIS
1	E	113	ASN
1	E	130	ASN
1	E	165	ASN
1	F	13	ASN
1	F	36	GLN
1	F	39	GLN
1	F	58	ASN
1	F	96	GLN
1	F	112	HIS
1	F	113	ASN
1	F	130	ASN
1	F	165	ASN
1	G	13	ASN
1	G	36	GLN
1	G	39	GLN
1	G	58	ASN
1	G	96	GLN

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Mol	Chain	Res	Type
1	G	99	ASN
1	G	112	HIS
1	G	113	ASN
1	G	130	ASN
1	H	36	GLN
1	H	39	GLN
1	H	58	ASN
1	H	96	GLN
1	H	99	ASN
1	H	112	HIS
1	H	113	ASN
1	H	130	ASN
1	H	165	ASN
1	I	13	ASN
1	I	36	GLN
1	I	39	GLN
1	I	58	ASN
1	I	96	GLN
1	I	112	HIS
1	I	113	ASN
1	I	130	ASN
1	I	165	ASN
1	J	13	ASN
1	J	36	GLN
1	J	39	GLN
1	J	58	ASN
1	J	96	GLN
1	J	99	ASN
1	J	112	HIS
1	J	113	ASN
1	J	130	ASN
1	J	165	ASN
1	K	36	GLN
1	K	39	GLN
1	K	49	GLN
1	K	58	ASN
1	K	96	GLN
1	K	99	ASN
1	K	113	ASN
1	K	130	ASN
1	K	165	ASN
1	L	36	GLN

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Mol	Chain	Res	Type
1	L	39	GLN
1	L	49	GLN
1	L	58	ASN
1	L	96	GLN
1	L	99	ASN
1	L	113	ASN
1	L	130	ASN
1	L	165	ASN

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 ⓘ

Of 24 ligands modelled in this entry, 12 are monoatomic - leaving 12 for Mogul analysis.

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	$\#|Z| > 2$
3	TRS	A	602	-	7,7,7	0.86	0	9,9,9	1.12	0
3	TRS	E	603	-	7,7,7	0.58	0	9,9,9	1.33	1 (11%)
3	TRS	J	611	-	7,7,7	0.56	0	9,9,9	1.10	0
3	TRS	D	606	-	7,7,7	0.60	0	9,9,9	1.12	0
3	TRS	C	604	-	7,7,7	0.88	0	9,9,9	1.04	0
3	TRS	L	608	-	7,7,7	0.73	0	9,9,9	1.07	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#|Z| > 2$	Counts	RMSZ	$\#|Z| > 2$
3	TRS	I	607	-	7,7,7	0.63	0	9,9,9	1.11	0
3	TRS	J	612	-	7,7,7	0.63	0	9,9,9	1.11	0
3	TRS	F	605	-	7,7,7	0.60	0	9,9,9	1.11	0
3	TRS	A	601	-	7,7,7	0.59	0	9,9,9	1.14	0
3	TRS	L	609	-	7,7,7	0.74	0	9,9,9	1.08	0
3	TRS	K	610	-	7,7,7	0.77	0	9,9,9	1.04	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
3	TRS	A	602	-	-	0/9/9/9	-
3	TRS	E	603	-	-	2/9/9/9	-
3	TRS	J	611	-	-	0/9/9/9	-
3	TRS	D	606	-	-	0/9/9/9	-
3	TRS	C	604	-	-	0/9/9/9	-
3	TRS	L	608	-	-	0/9/9/9	-
3	TRS	I	607	-	-	0/9/9/9	-
3	TRS	J	612	-	-	0/9/9/9	-
3	TRS	F	605	-	-	0/9/9/9	-
3	TRS	A	601	-	-	0/9/9/9	-
3	TRS	L	609	-	-	0/9/9/9	-
3	TRS	K	610	-	-	0/9/9/9	-

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	E	603	TRS	C2-C-C1	-2.21	103.95	110.81

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	E	603	TRS	C2-C-C1-O1
3	E	603	TRS	C1-C-C3-O3

There are no ring outliers.

5 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	E	603	TRS	3	0
3	J	611	TRS	1	0
3	D	606	TRS	2	0
3	F	605	TRS	1	0
3	A	601	TRS	3	0

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(Å²)	Q<0.9
1	A	156/167 (93%)	0.17	1 (0%)	89	89	27, 47, 69, 78	0
1	B	156/167 (93%)	0.18	1 (0%)	89	89	28, 51, 73, 93	0
1	C	156/167 (93%)	0.08	1 (0%)	89	89	24, 44, 68, 90	0
1	D	156/167 (93%)	0.03	0	100	100	22, 37, 61, 68	0
1	E	156/167 (93%)	0.14	1 (0%)	89	89	23, 42, 63, 79	0
1	F	156/167 (93%)	0.15	0	100	100	24, 41, 62, 80	0
1	G	156/167 (93%)	1.40	39 (25%)	0	0	57, 88, 106, 119	0
1	H	156/167 (93%)	1.67	55 (35%)	0	0	66, 93, 107, 120	0
1	I	156/167 (93%)	0.67	10 (6%)	19	15	48, 73, 93, 99	0
1	J	156/167 (93%)	0.92	22 (14%)	2	2	48, 74, 108, 132	0
1	K	156/167 (93%)	0.89	22 (14%)	2	2	49, 83, 100, 109	0
1	L	156/167 (93%)	1.68	55 (35%)	0	0	74, 98, 112, 134	0
All	All	1872/2004 (93%)	0.66	207 (11%)	5	3	22, 63, 104, 134	0

All (207) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	L	87	LEU	10.3
1	L	88	GLY	8.7
1	J	14	LEU	7.9
1	L	141	ASP	7.8
1	H	109	LEU	6.4
1	H	125	TYR	6.0
1	G	136	ILE	6.0
1	H	148	LEU	5.9
1	H	14	LEU	5.5
1	H	166	ILE	5.4
1	L	15	LEU	5.4

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Mol	Chain	Res	Type	RSRZ
1	H	12	THR	5.3
1	E	12	THR	5.3
1	J	13	ASN	5.2
1	H	46	ILE	5.2
1	G	38	ILE	5.2
1	J	15	LEU	5.0
1	G	88	GLY	4.9
1	L	148	LEU	4.8
1	G	89	GLY	4.7
1	H	52	TRP	4.7
1	L	85	VAL	4.6
1	H	93	GLY	4.6
1	H	13	ASN	4.6
1	H	139	ALA	4.6
1	L	17	THR	4.5
1	H	165	ASN	4.5
1	G	15	LEU	4.5
1	G	159	LEU	4.5
1	H	107	TYR	4.4
1	K	87	LEU	4.3
1	H	66	LEU	4.3
1	L	156	ASP	4.2
1	L	81	ALA	4.2
1	H	159	LEU	4.2
1	G	29	THR	4.2
1	L	125	TYR	4.1
1	J	21	VAL	4.0
1	G	14	LEU	4.0
1	H	132	VAL	4.0
1	G	86	GLN	3.9
1	J	161	PHE	3.9
1	L	128	VAL	3.9
1	H	73	LEU	3.8
1	J	16	TYR	3.8
1	L	50	ALA	3.8
1	H	53	ASN	3.8
1	L	41	ILE	3.7
1	G	33	LEU	3.6
1	H	49	GLN	3.6
1	L	19	ASN	3.5
1	H	19	ASN	3.5
1	J	88	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
1	K	111	ILE	3.4
1	L	56	GLY	3.4
1	H	81	ALA	3.4
1	J	111	ILE	3.4
1	H	50	ALA	3.4
1	G	104	LEU	3.4
1	K	39	GLN	3.4
1	L	52	TRP	3.4
1	H	140	LYS	3.3
1	G	118	LEU	3.3
1	H	87	LEU	3.3
1	L	89	GLY	3.3
1	H	38	ILE	3.3
1	L	14	LEU	3.3
1	H	121	LEU	3.3
1	H	89	GLY	3.3
1	H	134	LYS	3.2
1	L	91	ALA	3.2
1	L	115	GLN	3.2
1	J	17	THR	3.2
1	H	84	ALA	3.2
1	G	42	ASP	3.2
1	G	87	LEU	3.2
1	L	40	PHE	3.2
1	H	47	THR	3.2
1	G	100	SER	3.1
1	L	54	MET	3.1
1	L	121	LEU	3.1
1	K	93	GLY	3.1
1	L	96	GLN	3.1
1	K	92	LEU	3.1
1	H	54	MET	3.1
1	I	162	ILE	3.1
1	G	139	ALA	3.0
1	L	37	VAL	3.0
1	J	91	ALA	3.0
1	G	162	ILE	3.0
1	L	45	LEU	3.0
1	G	16	TYR	3.0
1	K	140	LYS	3.0
1	J	90	VAL	3.0
1	L	104	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
1	H	26	LYS	2.9
1	J	112	HIS	2.9
1	A	111	ILE	2.9
1	L	43	LEU	2.9
1	G	165	ASN	2.8
1	H	77	LEU	2.8
1	J	87	LEU	2.8
1	G	84	ALA	2.8
1	L	111	ILE	2.8
1	I	144	THR	2.8
1	G	161	PHE	2.8
1	I	160	TRP	2.7
1	H	92	LEU	2.7
1	H	123	ASP	2.7
1	G	21	VAL	2.7
1	G	125	TYR	2.7
1	L	36	GLN	2.7
1	L	116	ASP	2.7
1	G	81	ALA	2.7
1	L	35	ARG	2.7
1	L	92	LEU	2.6
1	H	17	THR	2.6
1	L	39	GLN	2.6
1	G	73	LEU	2.6
1	H	114	VAL	2.6
1	H	29	THR	2.6
1	H	163	GLU	2.6
1	J	29	THR	2.6
1	L	106	SER	2.6
1	K	19	ASN	2.6
1	H	21	VAL	2.6
1	G	52	TRP	2.6
1	K	25	GLU	2.6
1	J	136	ILE	2.6
1	I	107	TYR	2.6
1	K	104	LEU	2.5
1	G	124	ARG	2.5
1	L	62	VAL	2.5
1	K	91	ALA	2.5
1	G	111	ILE	2.5
1	L	46	ILE	2.5
1	H	15	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	L	147	ILE	2.5
1	K	43	LEU	2.5
1	L	107	TYR	2.5
1	H	161	PHE	2.5
1	L	84	ALA	2.5
1	I	17	THR	2.5
1	H	156	ASP	2.4
1	L	117	HIS	2.4
1	K	83	ARG	2.4
1	L	98	ILE	2.4
1	K	125	TYR	2.4
1	G	44	SER	2.4
1	K	32	LEU	2.4
1	I	87	LEU	2.4
1	G	107	TYR	2.4
1	G	112	HIS	2.4
1	J	12	THR	2.4
1	K	149	THR	2.4
1	H	142	ASP	2.4
1	C	87	LEU	2.4
1	G	93	GLY	2.3
1	H	95	THR	2.3
1	G	91	ALA	2.3
1	H	133	ARG	2.3
1	I	38	ILE	2.3
1	G	116	ASP	2.3
1	K	132	VAL	2.3
1	H	122	ALA	2.3
1	K	162	ILE	2.3
1	L	93	GLY	2.3
1	G	77	LEU	2.3
1	I	16	TYR	2.3
1	K	145	ALA	2.3
1	L	144	THR	2.3
1	K	55	ARG	2.3
1	L	55	ARG	2.3
1	H	80	MET	2.3
1	H	57	ALA	2.2
1	L	38	ILE	2.2
1	H	39	GLN	2.2
1	G	90	VAL	2.2
1	H	94	THR	2.2

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Mol	Chain	Res	Type	RSRZ
1	L	29	THR	2.2
1	L	32	LEU	2.2
1	L	112	HIS	2.2
1	L	109	LEU	2.2
1	B	87	LEU	2.2
1	G	105	LYS	2.2
1	L	53	ASN	2.1
1	J	22	SER	2.1
1	L	63	HIS	2.1
1	L	16	TYR	2.1
1	K	30	VAL	2.1
1	K	29	THR	2.1
1	H	104	LEU	2.1
1	H	33	LEU	2.1
1	I	39	GLN	2.1
1	H	91	ALA	2.1
1	I	166	ILE	2.1
1	J	107	TYR	2.1
1	K	40	PHE	2.1
1	L	118	LEU	2.0
1	J	24	SER	2.0
1	J	35	ARG	2.0
1	H	60	ILE	2.0
1	J	84	ALA	2.0
1	J	104	LEU	2.0
1	G	164	SER	2.0
1	G	109	LEU	2.0
1	L	130	ASN	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 monosaccharides 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($Å^2$)	Q<0.9
3	TRS	K	610	8/8	0.66	0.30	100,102,102,103	0
3	TRS	I	607	8/8	0.76	0.36	97,98,99,99	0
3	TRS	L	609	8/8	0.78	0.22	86,88,88,89	0
3	TRS	C	604	8/8	0.84	0.24	72,74,75,76	0
3	TRS	A	602	8/8	0.84	0.26	65,67,67,69	0
2	ZN	L	201	1/1	0.88	0.13	91,91,91,91	0
3	TRS	L	608	8/8	0.88	0.30	83,85,85,85	0
3	TRS	J	611	8/8	0.88	0.21	66,69,70,70	0
3	TRS	E	603	8/8	0.89	0.24	45,47,48,50	0
3	TRS	A	601	8/8	0.92	0.22	48,50,52,54	0
3	TRS	J	612	8/8	0.93	0.21	70,71,72,72	0
3	TRS	F	605	8/8	0.94	0.23	53,54,55,58	0
2	ZN	H	201	1/1	0.95	0.20	66,66,66,66	0
3	TRS	D	606	8/8	0.97	0.16	35,36,37,38	0
2	ZN	G	201	1/1	0.97	0.14	78,78,78,78	0
2	ZN	I	201	1/1	0.97	0.17	48,48,48,48	0
2	ZN	J	201	1/1	0.98	0.16	62,62,62,62	0
2	ZN	C	201	1/1	0.98	0.16	31,31,31,31	0
2	ZN	F	201	1/1	0.99	0.19	33,33,33,33	0
2	ZN	K	201	1/1	0.99	0.09	54,54,54,54	0
2	ZN	A	201	1/1	0.99	0.16	33,33,33,33	0
2	ZN	D	201	1/1	0.99	0.19	24,24,24,24	0
2	ZN	E	201	1/1	0.99	0.19	29,29,29,29	0
2	ZN	B	201	1/1	1.00	0.14	32,32,32,32	0

6.5 Other polymers (i)

There are no such residues in this entry.