



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 30, 2023 – 06:28 AM EDT

PDB ID : 3LZB
Title : EGFR kinase domain complexed with an imidazo[2,1-b]thiazole inhibitor
Authors : Swinger, K.K.
Deposited on : 2010-03-01
Resolution : 2.70 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35
buster-report : 1.1.7 (2018)
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) : 2.35

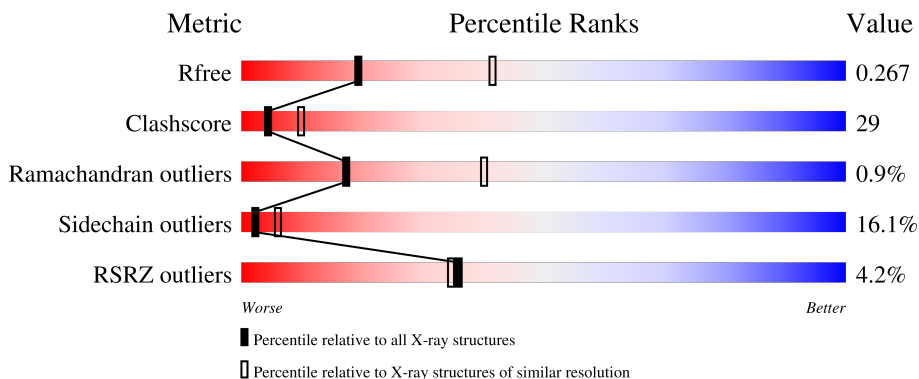
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2808 (2.70-2.70)
Clashscore	141614	3122 (2.70-2.70)
Ramachandran outliers	138981	3069 (2.70-2.70)
Sidechain outliers	138945	3069 (2.70-2.70)
RSRZ outliers	127900	2737 (2.70-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	327	 2% 46% 28% 7% 19%
1	B	327	 % 46% 28% 6% 19%
1	C	327	 5% 46% 25% 7% 21%
1	D	327	 6% 43% 28% 9% 20%
1	E	327	 .. 97%

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Mol	Chain	Length	Quality of chain
1	F	327	98%
1	G	327	98%
1	H	327	97%

2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 8885 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.

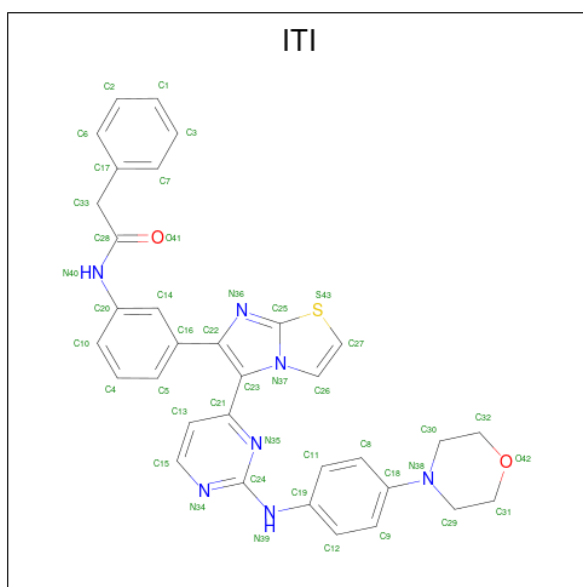
- Molecule 1 is a protein called Epidermal growth factor receptor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	265	Total 2120	C 1370	N 360	O 375	S 15	0	0	0
1	B	265	Total 2116	C 1368	N 360	O 373	S 15	0	0	0
1	C	259	Total 2078	C 1343	N 354	O 366	S 15	0	0	0
1	D	261	Total 2087	C 1350	N 355	O 367	S 15	0	0	0
1	E	9	Total 45	C 27	N 9	O 9		0	0	0
1	F	7	Total 35	C 21	N 7	O 7		0	0	0
1	G	7	Total 35	C 21	N 7	O 7		0	0	0
1	H	9	Total 45	C 27	N 9	O 9		0	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	924	ARG	VAL	engineered mutation	UNP P00533
B	924	ARG	VAL	engineered mutation	UNP P00533
C	924	ARG	VAL	engineered mutation	UNP P00533
D	924	ARG	VAL	engineered mutation	UNP P00533
E	-29	ARG	VAL	engineered mutation	UNP P00533
F	-28	ARG	VAL	engineered mutation	UNP P00533
G	-30	ARG	VAL	engineered mutation	UNP P00533
H	-31	ARG	VAL	engineered mutation	UNP P00533

- Molecule 2 is N-[3-(5-{2-[(4-morpholin-4-ylphenyl)amino]pyrimidin-4-yl}imidazo[2,1-b][1,3]thiazol-6-yl)phenyl]-2-phenylacetamide (three-letter code: ITI) (formula: C₃₃H₂₉N₇O₂S).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
			Total	C	N	O			S
2	A	1	43	33	7	2	1	0	0
2	B	1	43	33	7	2	1	0	0
2	C	1	43	33	7	2	1	0	0
2	D	1	43	33	7	2	1	0	0

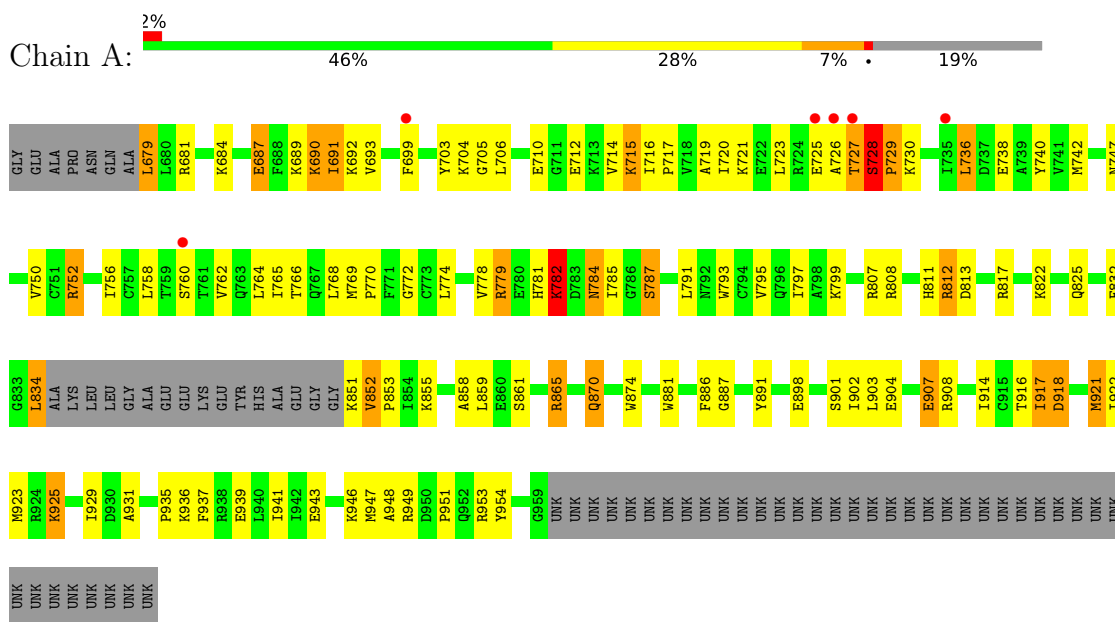
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	40	Total	O	0	0
			40	40		
3	B	45	Total	O	0	0
			45	45		
3	C	35	Total	O	0	0
			35	35		
3	D	21	Total	O	0	0
			21	21		
3	E	3	Total	O	0	0
			3	3		
3	F	4	Total	O	0	0
			4	4		
3	G	2	Total	O	0	0
			2	2		
3	H	2	Total	O	0	0
			2	2		

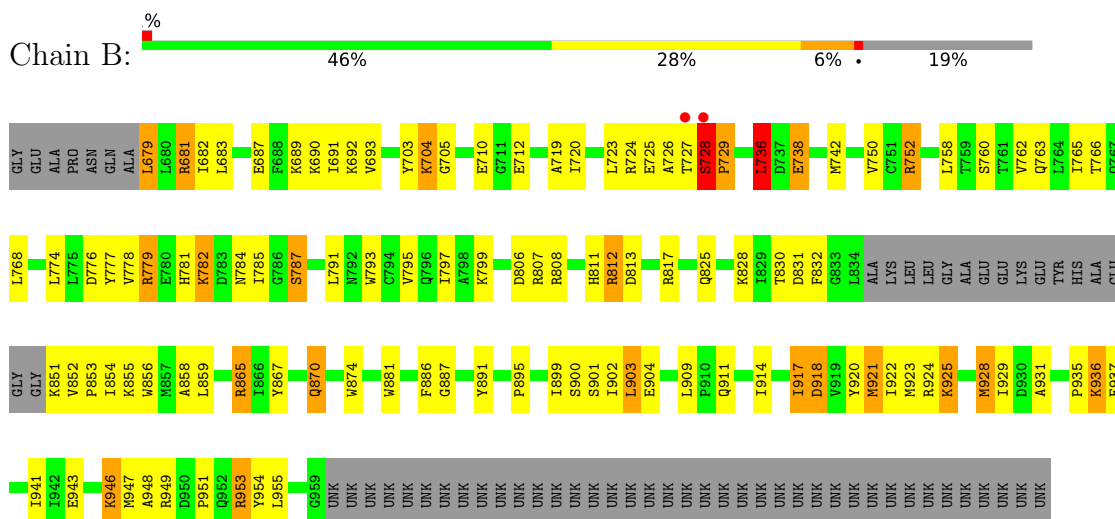
3 Residue-property plots [i](#)

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: Epidermal growth factor receptor



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GLY	ASN	ASN	ASN	VAL	PRO	PRO	UNK
GLU	LYS	TRP	TRP	PRO	PRO	UNK	UNK
ALA	GLU	CYS	ILE	ILE	ILE	UNK	UNK
PRO	ILE	VAL	VAL	LYS	CYS	UNK	UNK
ASN	LEU	GLN	TRP	THR	THR	UNK	UNK
ASP	GLN	MET	ILE	MET	ILE	UNK	UNK
GLU	ALA	ALA	ALA	ASP	ASP	UNK	UNK
LEU	ALA	LYS	LYS	VAL	VAL	UNK	UNK
LEU	TYR	GLY	GLY	TYR	TYR	UNK	UNK
ARG	VAL	MET	MET	SER	MET	UNK	UNK
ILE	MET	ASN	ASN	ILE	ILE	UNK	UNK
LEU	ALA	TYR	TYR	LEU	MET	UNK	UNK
LYS	SER	LEU	HIS	ARG	ARG	UNK	UNK
GLU	VAL	GLU	GLU	ARG	LYS	UNK	UNK
THR	ASP	ASP	ASP	ILE	CYS	UNK	UNK
GLU	ASN	ARG	ARG	TYR	TRP	UNK	UNK
PHE	PRO	PHE	THR	THR	ILE	UNK	UNK
LYS	HIS	LEU	HIS	HIS	ILE	UNK	UNK
LYS	VAL	VAL	GLN	SER	ASP	UNK	UNK
ILE	CYS	HIS	SER	ASP	ALA	UNK	UNK
VAL	ARG	ARG	VAL	VAL	ASP	UNK	UNK
VAL	LEU	LEU	VAL	TRP	SER	UNK	UNK
GLY	LEU	LEU	TRP	TRP	TRP	UNK	UNK
GLY	GLY	ILE	ALA	SER	LYS	UNK	UNK
TYR	ILE	GLN	ALA	TYR	PHE	UNK	UNK
LYS	LEU	PRO	ARG	GLY	ARG	UNK	UNK
GLY	CYS	GLY	GLY	VAL	ARG	UNK	UNK
ALA	LEU	LEU	ASN	VAL	ARG	UNK	UNK
PHE	THR	THR	PHE	THR	GLU	UNK	UNK
GLY	SER	VAL	VAL	VAL	ILE	UNK	UNK
THR	THR	VAL	THR	TRP	ILE	UNK	UNK
VAL	VAL	VAL	LYS	GLU	ILE	UNK	UNK
VAL	GLN	THR	THR	LEU	GLU	UNK	UNK
PRO	LEU	PRO	ILE	MET	PHE	UNK	UNK
ILE	GLY	GLY	GLN	THR	SER	UNK	UNK
TRP	THR	GLN	HIS	THR	LYS	UNK	UNK
ILE	THR	VAL	THR	GLY	MET	UNK	UNK
LEU	LEU	GLN	VAL	VAL	ALA	UNK	UNK
MET	LEU	ILE	LYS	SER	ARG	UNK	UNK
PRO	MET	THR	ILE	LYS	ARG	UNK	UNK
GLU	PRO	THR	ILE	ARG	ASP	UNK	UNK
GLY	GLY	PHE	THR	TYR	PRO	UNK	UNK
GLU	GLY	GLU	ASP	ASP	GLN	UNK	UNK
VAL	CYS	LYS	GLY	ILE	ARG	UNK	UNK
VAL	LEU	LEU	LEU	PRO	TYR	UNK	UNK
ILE	ASP	LYS	ALA	ALA	VAL	UNK	UNK
PRO	LYS	LYS	LYS	ALA	ILE	UNK	UNK
LYS	GLU	LYS	GLY	GLY	GLN	UNK	UNK
ALA	LEU	HIS	GLU	ILE	GLY	UNK	UNK
THR	LYS	GLU	GLU	SER	X5	UNK	UNK
SER	LYS	GLU	GLU	SER	X8	UNK	UNK
GLU	ASP	LYS	LYS	ILE	X9	UNK	UNK
LEU	ASN	GLU	GLU	GLY	X13	UNK	UNK
ARG	ASN	TYR	TYR	LYS	UNK	UNK	UNK
GLY	ILE	HIS	ALA	THR	UNK	UNK	UNK
THR	GLY	ALA	SER	GLY	UNK	UNK	UNK
THR	SER	THR	GLU	ARG	UNK	UNK	UNK
PRO	GLN	GLU	GLY	LEU	UNK	UNK	UNK
LYS	LEU	GLY	GLY	PRO	UNK	UNK	UNK
ALA	LEU	GLY	GLY	GLN	UNK	UNK	UNK

4 Data and refinement statistics i

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	85.59Å 70.87Å 115.18Å 90.00° 109.36° 90.00°	Depositor
Resolution (Å)	44.17 – 2.70 44.16 – 2.70	Depositor EDS
% Data completeness (in resolution range)	99.5 (44.17-2.70) 99.7 (44.16-2.70)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	0.13	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.76 (at 2.69Å)	Xtrriage
Refinement program	BUSTER-TNT 2.5.1	Depositor
R, R_{free}	0.204 , 0.257 0.208 , 0.267	Depositor DCC
R_{free} test set	1801 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	49.4	Xtrriage
Anisotropy	0.430	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 91.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	0.000 for h,-k,-h-l	Xtrriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	8885	wwPDB-VP
Average B, all atoms (Å ²)	57.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 30.19 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.3626e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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: ITI

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	0.70	0/2167	0.84	1/2935 (0.0%)
1	B	0.69	1/2163 (0.0%)	0.85	2/2930 (0.1%)
1	C	0.60	0/2123	0.75	1/2873 (0.0%)
1	D	0.55	0/2132	0.75	1/2886 (0.0%)
All	All	0.64	1/8585 (0.0%)	0.80	5/11624 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	750	VAL	CB-CG1	5.56	1.64	1.52

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	728	SER	C-N-CD	-14.71	88.23	120.60
1	A	728	SER	C-N-CD	-14.55	88.58	120.60
1	B	736	LEU	CA-CB-CG	5.62	128.21	115.30
1	C	704	LYS	N-CA-C	-5.17	97.03	111.00
1	D	704	LYS	N-CA-C	-5.09	97.26	111.00

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	2120	0	2169	113	0
1	B	2116	0	2165	119	0
1	C	2078	0	2122	115	0
1	D	2087	0	2129	136	0
1	E	45	0	11	6	0
1	F	35	0	10	4	0
1	G	35	0	11	8	0
1	H	45	0	11	6	0
2	A	43	0	29	16	0
2	B	43	0	29	11	0
2	C	43	0	29	13	0
2	D	43	0	29	19	0
3	A	40	0	0	2	0
3	B	45	0	0	8	0
3	C	35	0	0	1	0
3	D	21	0	0	0	0
3	E	3	0	0	1	0
3	F	4	0	0	0	0
3	G	2	0	0	0	0
3	H	2	0	0	0	0
All	All	8885	0	8744	505	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 29.

All (505) 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:715:LYS:HE3	1:D:715:LYS:H	1.23	1.00
1:C:691:ILE:HG22	1:C:692:LYS:HG2	1.41	1.00
1:D:691:ILE:HG22	1:D:692:LYS:HG2	1.41	0.99
1:B:736:LEU:HD13	1:B:758:LEU:HD11	1.43	0.99
1:C:715:LYS:HE2	1:C:715:LYS:H	1.28	0.98
1:D:753:LEU:HD21	1:D:764:LEU:HD22	1.42	0.98
1:B:725:GLU:HG2	1:B:726:ALA:H	1.27	0.97
1:C:925:LYS:HD2	1:C:935:PRO:HD3	1.44	0.97
1:B:691:ILE:HG22	1:B:692:LYS:HG2	1.46	0.97
1:A:925:LYS:HD2	1:A:935:PRO:HD3	1.46	0.96
1:B:925:LYS:HD2	1:B:935:PRO:HD3	1.46	0.96
1:D:925:LYS:HD2	1:D:935:PRO:HD3	1.47	0.94
1:A:725:GLU:HG2	1:A:726:ALA:H	1.34	0.92
1:C:947:MET:HG2	1:C:954:TYR:CG	2.03	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:914:ILE:HG13	1:D:955:LEU:CD2	2.00	0.91
1:C:706:LEU:HD22	1:C:715:LYS:HB2	1.51	0.90
1:A:693:VAL:HG11	1:B:806:ASP:HB3	1.54	0.89
1:D:925:LYS:CD	1:D:935:PRO:HD3	2.05	0.87
1:A:855:LYS:HG2	1:A:891:TYR:HD1	1.39	0.86
1:C:855:LYS:HG2	1:C:891:TYR:HD1	1.40	0.86
1:C:925:LYS:CD	1:C:935:PRO:HD3	2.06	0.86
1:A:925:LYS:CD	1:A:935:PRO:HD3	2.06	0.85
1:D:855:LYS:HG2	1:D:891:TYR:HD1	1.39	0.85
1:B:925:LYS:CD	1:B:935:PRO:HD3	2.07	0.83
1:B:855:LYS:HG2	1:B:891:TYR:HD1	1.42	0.83
1:D:681:ARG:NH2	1:D:707:TRP:HZ3	1.77	0.83
1:A:699:PHE:CG	1:A:834:LEU:HD12	2.13	0.83
1:D:715:LYS:HD2	1:D:715:LYS:O	1.80	0.82
1:D:715:LYS:H	1:D:715:LYS:CE	1.92	0.81
1:A:691:ILE:HD13	1:A:706:LEU:HG	1.60	0.81
1:A:939:GLU:O	1:A:943:GLU:HG3	1.79	0.81
1:B:921:MET:HG3	1:C:898:GLU:HG2	1.63	0.81
1:C:715:LYS:HD2	1:C:715:LYS:O	1.81	0.80
1:D:947:MET:HE2	1:D:954:TYR:HB3	1.63	0.80
1:B:729:PRO:HA	3:B:23:HOH:O	1.80	0.80
1:D:834:LEU:HD23	2:D:1:ITI:H1	1.63	0.80
1:B:948:ALA:O	1:B:951:PRO:HD3	1.81	0.80
1:A:736:LEU:HD23	1:A:740:TYR:CE1	2.17	0.79
2:D:1:ITI:H12	2:D:1:ITI:N35	1.97	0.79
1:C:681:ARG:NH2	1:G:12:UNK:HA	1.98	0.79
1:B:924:ARG:HH22	1:B:928:MET:HE1	1.48	0.78
1:D:834:LEU:HD21	2:D:1:ITI:H3	1.63	0.78
1:C:715:LYS:H	1:C:715:LYS:CE	1.96	0.78
1:D:787:SER:OG	1:D:951:PRO:HB2	1.82	0.78
1:B:921:MET:HG3	1:C:898:GLU:CG	2.13	0.78
1:D:684:LYS:H	1:D:687:GLU:HG3	1.49	0.78
1:C:705:GLY:HA3	1:C:720:ILE:CD1	2.14	0.77
1:A:691:ILE:HG22	1:A:692:LYS:HG2	1.67	0.77
1:A:787:SER:HB2	1:A:951:PRO:HB2	1.67	0.77
1:D:705:GLY:HA3	1:D:720:ILE:CD1	2.14	0.77
1:B:705:GLY:HA3	1:B:720:ILE:CD1	2.14	0.77
1:D:947:MET:HE3	1:D:954:TYR:CD2	2.19	0.77
1:A:715:LYS:H	1:A:715:LYS:HE2	1.48	0.76
1:A:812:ARG:HG3	1:A:812:ARG:HH11	1.51	0.75
1:B:924:ARG:NH2	1:B:928:MET:HE1	2.02	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:914:ILE:HG13	1:D:955:LEU:HD22	1.68	0.75
1:C:723:LEU:HB2	1:C:762:VAL:CG1	2.17	0.75
1:E:15:UNK:HA	3:E:68:HOH:O	1.87	0.75
1:A:736:LEU:HD12	1:A:758:LEU:HD11	1.68	0.74
1:A:699:PHE:CD1	1:A:834:LEU:HD12	2.22	0.74
1:B:793:TRP:O	1:B:797:ILE:HG13	1.87	0.74
1:A:769:MET:HB3	3:A:257:HOH:O	1.86	0.73
1:C:756:ILE:HG13	1:C:764:LEU:HD23	1.68	0.73
1:A:723:LEU:HB2	1:A:762:VAL:CG1	2.18	0.73
1:D:723:LEU:HB2	1:D:762:VAL:CG1	2.19	0.73
1:D:855:LYS:HG2	1:D:891:TYR:CD1	2.24	0.73
1:A:793:TRP:O	1:A:797:ILE:HG13	1.89	0.72
1:A:784:ASN:N	1:A:784:ASN:ND2	2.36	0.72
1:A:681:ARG:NH1	1:F:13:UNK:CB	2.53	0.72
1:A:855:LYS:HG2	1:A:891:TYR:CD1	2.24	0.72
1:D:795:VAL:O	1:D:799:LYS:HG3	1.89	0.72
1:D:707:TRP:HD1	1:D:708:ILE:N	1.87	0.71
1:C:793:TRP:O	1:C:797:ILE:HG13	1.90	0.71
1:A:715:LYS:HD2	1:A:715:LYS:O	1.89	0.71
1:B:928:MET:HA	1:B:928:MET:CE	2.21	0.71
1:D:793:TRP:O	1:D:797:ILE:HG13	1.90	0.71
1:A:705:GLY:HA3	1:A:720:ILE:CD1	2.19	0.71
2:D:1:ITI:H12	2:D:1:ITI:H26	1.72	0.71
1:B:723:LEU:HB2	1:B:762:VAL:CG1	2.21	0.71
1:D:784:ASN:N	1:D:784:ASN:ND2	2.39	0.70
1:C:693:VAL:HG22	1:C:703:TYR:CE2	2.27	0.70
1:B:855:LYS:HG2	1:B:891:TYR:CD1	2.27	0.70
1:G:9:UNK:HA	1:G:12:UNK:C	2.22	0.70
1:B:921:MET:CG	1:C:898:GLU:HG2	2.21	0.70
1:A:693:VAL:HG22	1:A:703:TYR:CE2	2.26	0.69
1:A:715:LYS:HE2	1:A:715:LYS:N	2.07	0.69
1:A:736:LEU:CD1	1:A:758:LEU:HD11	2.21	0.69
1:D:694:LEU:O	2:D:1:ITI:H30A	1.92	0.69
1:A:795:VAL:O	1:A:799:LYS:HG3	1.91	0.69
1:C:795:VAL:O	1:C:799:LYS:HG3	1.91	0.69
1:B:795:VAL:O	1:B:799:LYS:HG3	1.93	0.69
1:D:715:LYS:HE3	1:D:715:LYS:N	2.05	0.69
1:C:936:LYS:HE3	3:C:198:HOH:O	1.93	0.69
1:D:715:LYS:O	1:D:716:ILE:HD13	1.93	0.69
1:D:681:ARG:CZ	1:D:707:TRP:HZ3	2.06	0.69
1:D:707:TRP:HH2	1:H:8:UNK:CB	2.05	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:855:LYS:HG2	1:C:891:TYR:CD1	2.25	0.68
1:D:898:GLU:O	1:D:902:ILE:HG23	1.94	0.68
1:C:723:LEU:HB2	1:C:762:VAL:HG13	1.76	0.68
1:C:784:ASN:N	1:C:784:ASN:ND2	2.42	0.67
1:D:693:VAL:HG22	1:D:703:TYR:CE2	2.29	0.67
1:A:769:MET:O	2:A:1:ITI:H12	1.95	0.67
1:A:779:ARG:O	1:A:782:LYS:HG2	1.94	0.67
1:D:707:TRP:CH2	1:H:8:UNK:CB	2.78	0.66
1:C:898:GLU:O	1:C:902:ILE:HG23	1.96	0.66
1:B:953:ARG:HG2	1:B:954:TYR:CE1	2.30	0.66
1:C:736:LEU:HD12	1:C:758:LEU:HD11	1.78	0.66
1:C:742:MET:CE	2:C:1:ITI:H2	2.26	0.66
1:C:899:ILE:HG22	1:C:903:LEU:CD2	2.26	0.66
1:A:898:GLU:O	1:A:902:ILE:HG23	1.96	0.65
1:C:958:GLN:HA	1:C:958:GLN:OE1	1.95	0.65
1:D:723:LEU:HB2	1:D:762:VAL:HG13	1.78	0.65
1:A:715:LYS:H	1:A:715:LYS:CE	2.10	0.65
1:A:723:LEU:HB2	1:A:762:VAL:HG13	1.78	0.65
1:B:924:ARG:HH22	1:B:928:MET:CE	2.09	0.65
1:C:715:LYS:HE2	1:C:715:LYS:N	2.07	0.65
1:F:8:UNK:O	1:F:12:UNK:N	2.29	0.65
1:A:881:TRP:CD1	1:A:923:MET:HE1	2.32	0.65
1:B:795:VAL:HG12	1:B:799:LYS:HE3	1.77	0.65
1:D:795:VAL:HG12	1:D:799:LYS:HE3	1.79	0.64
1:A:795:VAL:HG12	1:A:799:LYS:HE3	1.79	0.64
1:D:707:TRP:CD1	1:D:707:TRP:C	2.71	0.64
1:A:723:LEU:HD12	1:A:762:VAL:HG11	1.80	0.64
1:A:721:LYS:HE3	2:A:1:ITI:N36	2.13	0.63
1:B:723:LEU:HD12	1:B:762:VAL:HG11	1.79	0.63
1:B:736:LEU:HD13	1:B:758:LEU:CD1	2.23	0.63
1:B:895:PRO:HA	3:B:229:HOH:O	1.99	0.63
1:B:917:ILE:HD12	1:C:898:GLU:HG3	1.81	0.63
1:D:705:GLY:HA3	1:D:720:ILE:HD11	1.80	0.63
1:B:779:ARG:O	1:B:782:LYS:HE2	1.99	0.62
1:C:947:MET:HG2	1:C:954:TYR:CD1	2.34	0.62
1:B:723:LEU:HD12	1:B:762:VAL:CG1	2.29	0.62
1:A:902:ILE:HD12	1:A:907:GLU:HG2	1.82	0.62
1:B:681:ARG:CD	1:E:10:UNK:CB	2.78	0.62
1:A:679:LEU:N	1:A:679:LEU:HD12	2.15	0.62
1:A:784:ASN:ND2	1:A:784:ASN:H	1.96	0.62
1:A:947:MET:HG2	1:A:954:TYR:CG	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:684:LYS:H	1:C:687:GLU:HG3	1.65	0.61
1:D:779:ARG:O	1:D:782:LYS:HE2	2.00	0.61
1:B:705:GLY:HA3	1:B:720:ILE:HD11	1.81	0.61
1:B:693:VAL:HG22	1:B:703:TYR:CE2	2.34	0.61
1:B:725:GLU:HG2	1:B:726:ALA:N	2.08	0.61
1:C:705:GLY:HA3	1:C:720:ILE:HD11	1.83	0.61
1:B:723:LEU:HB2	1:B:762:VAL:HG13	1.82	0.61
1:C:691:ILE:HG22	1:C:692:LYS:CG	2.25	0.61
2:C:1:ITI:H12	2:C:1:ITI:N35	2.16	0.61
1:A:723:LEU:HD12	1:A:762:VAL:CG1	2.30	0.61
2:A:1:ITI:N35	2:A:1:ITI:H11	2.16	0.61
1:B:811:HIS:O	1:B:812:ARG:HB2	2.01	0.61
1:D:896:ALA:HA	1:D:899:ILE:HG12	1.83	0.60
1:D:684:LYS:O	1:D:687:GLU:HG3	2.01	0.60
1:D:705:GLY:HA3	1:D:720:ILE:HD12	1.83	0.60
1:C:779:ARG:O	1:C:782:LYS:HE2	2.01	0.60
1:A:784:ASN:N	1:A:784:ASN:HD22	2.00	0.60
1:D:818:ASN:O	1:D:830:THR:HG22	2.01	0.60
1:A:948:ALA:O	1:A:951:PRO:HD3	2.02	0.60
1:A:811:HIS:O	1:A:812:ARG:HB2	2.02	0.60
1:B:736:LEU:CD1	1:B:758:LEU:HD11	2.25	0.59
1:C:742:MET:HE1	2:C:1:ITI:H2	1.84	0.59
1:A:693:VAL:CG1	1:B:806:ASP:HB3	2.32	0.59
1:C:736:LEU:HD23	1:C:740:TYR:CE1	2.38	0.58
1:D:834:LEU:HD23	2:D:1:ITI:C1	2.33	0.58
1:A:725:GLU:HG2	1:A:726:ALA:N	2.13	0.58
2:B:1:ITI:H6	2:B:1:ITI:N40	2.18	0.58
1:B:943:GLU:O	1:B:947:MET:HG3	2.04	0.58
1:D:684:LYS:N	1:D:687:GLU:HG3	2.18	0.58
1:D:784:ASN:ND2	1:D:784:ASN:H	2.02	0.58
1:D:721:LYS:HE3	2:D:1:ITI:N36	2.19	0.58
1:B:728:SER:N	1:B:729:PRO:HD3	2.19	0.57
1:B:781:HIS:O	1:B:785:ILE:HG13	2.04	0.57
1:B:881:TRP:CD1	1:B:923:MET:HE1	2.39	0.57
1:A:881:TRP:HB2	1:A:923:MET:CE	2.34	0.57
1:A:690:LYS:HD3	1:A:703:TYR:CD1	2.40	0.57
1:C:723:LEU:HD12	1:C:762:VAL:HG11	1.86	0.57
1:D:723:LEU:HD12	1:D:762:VAL:HG11	1.86	0.57
1:B:691:ILE:HG22	1:B:692:LYS:CG	2.28	0.57
1:D:715:LYS:H	1:D:715:LYS:CD	2.15	0.57
1:D:753:LEU:HD12	1:D:754:LEU:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:795:VAL:HG12	1:C:799:LYS:HE3	1.87	0.57
1:C:791:LEU:HD12	1:C:951:PRO:HB3	1.86	0.57
1:D:679:LEU:O	1:D:752:ARG:NH2	2.38	0.57
1:A:881:TRP:HD1	1:A:923:MET:HE1	1.69	0.56
1:D:766:THR:HG23	2:D:1:ITI:H10	1.87	0.56
1:C:771:PHE:HB2	1:C:821:VAL:O	2.04	0.56
1:A:684:LYS:O	1:A:687:GLU:HG3	2.06	0.56
1:A:795:VAL:CG1	1:A:799:LYS:HE3	2.35	0.56
1:A:881:TRP:HB2	1:A:923:MET:HE3	1.87	0.56
2:A:1:ITI:C16	2:A:1:ITI:H13	2.35	0.56
1:D:731:ALA:O	1:D:735:ILE:HD12	2.06	0.56
1:D:735:ILE:O	1:D:738:GLU:HB2	2.05	0.56
2:D:1:ITI:H26	2:D:1:ITI:C12	2.36	0.56
1:A:705:GLY:HA3	1:A:720:ILE:HD11	1.87	0.56
1:D:881:TRP:HB2	1:D:923:MET:CE	2.36	0.56
1:B:881:TRP:HB2	1:B:923:MET:CE	2.36	0.56
1:C:832:PHE:CE2	2:C:1:ITI:H3	2.41	0.56
1:C:899:ILE:HG22	1:C:903:LEU:HD22	1.87	0.56
1:D:691:ILE:HG22	1:D:692:LYS:CG	2.26	0.56
1:D:834:LEU:HD21	2:D:1:ITI:C3	2.35	0.56
1:B:787:SER:OG	1:B:951:PRO:HB2	2.05	0.56
1:C:705:GLY:HA3	1:C:720:ILE:HD12	1.88	0.56
1:B:795:VAL:CG1	1:B:799:LYS:HE3	2.36	0.55
1:C:881:TRP:HB2	1:C:923:MET:CE	2.36	0.55
1:D:795:VAL:CG1	1:D:799:LYS:HE3	2.36	0.55
1:D:953:ARG:NH1	1:D:953:ARG:HG3	2.21	0.55
1:C:881:TRP:CD1	1:C:923:MET:HE1	2.41	0.55
1:D:781:HIS:O	1:D:785:ILE:HG13	2.06	0.55
1:D:925:LYS:HD3	1:D:935:PRO:HD3	1.87	0.55
1:C:736:LEU:HD23	1:C:740:TYR:HE1	1.70	0.55
1:D:723:LEU:HD12	1:D:762:VAL:CG1	2.36	0.55
1:A:721:LYS:CE	2:A:1:ITI:N36	2.70	0.55
1:A:782:LYS:NZ	1:B:946:LYS:HD2	2.22	0.54
1:D:691:ILE:CG2	1:D:692:LYS:HE2	2.37	0.54
1:A:916:THR:HG23	1:A:954:TYR:O	2.07	0.54
1:C:723:LEU:HD12	1:C:762:VAL:CG1	2.37	0.54
1:D:919:VAL:HG22	1:D:947:MET:CE	2.37	0.54
1:C:715:LYS:H	1:C:715:LYS:CD	2.20	0.54
1:G:8:UNK:O	1:G:12:UNK:O	2.25	0.54
1:B:899:ILE:O	1:B:903:LEU:HD22	2.08	0.54
1:C:684:LYS:O	1:C:687:GLU:HG3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:928:MET:HA	1:B:928:MET:HE2	1.90	0.54
1:C:766:THR:HG21	2:C:1:ITI:O41	2.08	0.54
1:A:946:LYS:HA	1:A:949:ARG:NH1	2.23	0.54
1:B:679:LEU:O	1:B:752:ARG:NH2	2.41	0.53
2:B:1:ITI:C16	2:B:1:ITI:H13	2.38	0.53
1:B:681:ARG:CZ	1:E:10:UNK:CB	2.86	0.53
1:B:683:LEU:HD23	1:B:687:GLU:OE1	2.08	0.53
1:C:691:ILE:CG2	1:C:692:LYS:HE2	2.37	0.53
1:D:953:ARG:HH11	1:D:953:ARG:CG	2.21	0.53
1:A:925:LYS:HD3	1:A:935:PRO:HD3	1.90	0.53
1:C:918:ASP:O	1:C:922:ILE:HG13	2.08	0.53
1:D:881:TRP:CD1	1:D:923:MET:HE1	2.43	0.53
1:A:736:LEU:HD23	1:A:740:TYR:HE1	1.70	0.53
1:C:781:HIS:O	1:C:785:ILE:HG13	2.07	0.53
1:D:784:ASN:N	1:D:784:ASN:HD22	2.06	0.53
1:D:681:ARG:NH2	1:D:707:TRP:CZ3	2.68	0.53
1:B:899:ILE:HG22	1:B:903:LEU:CD2	2.38	0.53
2:D:1:ITI:H10	2:D:1:ITI:O41	2.08	0.53
1:A:725:GLU:CG	1:A:726:ALA:H	2.12	0.52
1:A:859:LEU:HD21	1:A:904:GLU:HG3	1.91	0.52
1:C:946:LYS:HA	1:C:949:ARG:NH1	2.25	0.52
1:D:943:GLU:O	1:D:947:MET:HG3	2.08	0.52
1:B:928:MET:HA	1:B:928:MET:HE3	1.91	0.52
1:C:680:LEU:HD23	1:C:740:TYR:CE2	2.44	0.52
1:B:787:SER:HB3	3:B:39:HOH:O	2.09	0.52
1:D:834:LEU:CD2	2:D:1:ITI:H1	2.37	0.52
1:B:691:ILE:CG2	1:B:692:LYS:HE2	2.39	0.52
1:B:859:LEU:HD21	1:B:904:GLU:HG3	1.90	0.52
1:C:859:LEU:HD23	1:C:929:ILE:HD12	1.90	0.52
1:A:728:SER:N	1:A:729:PRO:HD3	2.24	0.52
1:B:899:ILE:HG22	1:B:903:LEU:HD22	1.92	0.52
1:A:918:ASP:O	1:A:922:ILE:HG13	2.09	0.52
1:B:705:GLY:HA3	1:B:720:ILE:HD12	1.88	0.52
1:B:719:ALA:CB	2:B:1:ITI:C15	2.88	0.52
1:D:791:LEU:CD1	1:D:955:LEU:HD12	2.40	0.52
1:C:738:GLU:O	1:C:741:VAL:N	2.42	0.51
1:D:918:ASP:O	1:D:922:ILE:HG13	2.09	0.51
1:D:681:ARG:CZ	1:H:8:UNK:CB	2.88	0.51
1:A:705:GLY:HA3	1:A:720:ILE:HD12	1.92	0.51
1:B:870:GLN:HG3	1:B:931:ALA:O	2.11	0.51
1:B:946:LYS:HA	1:B:949:ARG:NH1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:925:LYS:HD2	1:C:935:PRO:CD	2.30	0.51
1:D:870:GLN:HG3	1:D:931:ALA:O	2.11	0.51
1:B:681:ARG:HD3	1:E:10:UNK:CB	2.41	0.51
1:C:914:ILE:HG13	1:C:955:LEU:HD22	1.91	0.51
1:A:870:GLN:HG3	1:A:931:ALA:O	2.11	0.50
1:B:936:LYS:HE3	3:B:999:HOH:O	2.10	0.50
1:B:738:GLU:O	1:B:742:MET:HG3	2.10	0.50
1:B:953:ARG:HG2	1:B:954:TYR:CZ	2.45	0.50
1:C:870:GLN:HG3	1:C:931:ALA:O	2.12	0.50
1:D:946:LYS:HA	1:D:949:ARG:NH1	2.26	0.50
1:D:681:ARG:CZ	1:D:707:TRP:CZ3	2.92	0.50
1:B:859:LEU:HD23	1:B:929:ILE:HD12	1.94	0.50
1:B:925:LYS:O	1:B:928:MET:HG2	2.12	0.50
1:D:777:TYR:O	1:D:781:HIS:HD2	1.95	0.50
1:C:784:ASN:N	1:C:784:ASN:HD22	2.09	0.50
1:D:947:MET:HE2	1:D:954:TYR:CB	2.38	0.50
1:A:917:ILE:HD12	1:A:921:MET:SD	2.52	0.50
1:C:800:GLY:HA3	1:C:829:ILE:HD12	1.94	0.50
1:C:777:TYR:O	1:C:781:HIS:HD2	1.94	0.49
1:C:928:MET:HB2	1:C:934:ARG:HG3	1.92	0.49
1:A:679:LEU:O	1:A:752:ARG:NH2	2.46	0.49
1:A:859:LEU:HD23	1:A:929:ILE:HD12	1.94	0.49
2:B:1:ITI:H13	2:B:1:ITI:C5	2.41	0.49
2:A:1:ITI:H10	2:A:1:ITI:O41	2.12	0.49
2:C:1:ITI:N35	2:C:1:ITI:H26	2.27	0.49
2:A:1:ITI:N35	2:A:1:ITI:C11	2.73	0.49
1:C:855:LYS:HE2	1:C:899:ILE:HD11	1.94	0.49
1:D:707:TRP:CD1	1:D:708:ILE:N	2.74	0.49
1:A:812:ARG:HG3	1:A:812:ARG:NH1	2.26	0.49
1:C:795:VAL:CG1	1:C:799:LYS:HE3	2.43	0.49
1:B:937:PHE:O	1:B:941:ILE:HG13	2.14	0.48
1:D:681:ARG:NE	1:H:8:UNK:CB	2.76	0.48
1:B:909:LEU:N	3:B:42:HOH:O	2.29	0.48
1:D:681:ARG:NH2	1:H:8:UNK:CB	2.77	0.48
1:D:679:LEU:N	1:D:679:LEU:HD12	2.28	0.48
1:C:917:ILE:HD12	1:C:921:MET:SD	2.53	0.48
1:D:707:TRP:HD1	1:D:707:TRP:C	2.11	0.48
1:D:832:PHE:CE2	2:D:1:ITI:H6	2.48	0.48
1:D:881:TRP:HB2	1:D:923:MET:HE3	1.96	0.48
1:A:736:LEU:CD1	1:A:758:LEU:CD1	2.91	0.48
1:D:917:ILE:HD12	1:D:921:MET:SD	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:774:LEU:O	1:B:778:VAL:HG13	2.14	0.48
1:C:859:LEU:HD21	1:C:904:GLU:HG3	1.95	0.48
1:A:770:PRO:HD2	3:A:257:HOH:O	2.13	0.48
1:G:6:UNK:C	1:G:10:UNK:CB	2.91	0.48
1:C:742:MET:CE	2:C:1:ITI:C2	2.91	0.47
1:D:797:ILE:O	1:D:829:ILE:HD11	2.14	0.47
1:A:937:PHE:O	1:A:941:ILE:HG13	2.14	0.47
1:B:777:TYR:O	1:B:781:HIS:HD2	1.97	0.47
1:C:784:ASN:ND2	1:C:784:ASN:H	2.07	0.47
1:D:947:MET:CE	1:D:954:TYR:CD2	2.95	0.47
2:B:1:ITI:N35	2:B:1:ITI:H12	2.29	0.47
1:C:742:MET:HE2	2:C:1:ITI:H2	1.95	0.47
1:C:834:LEU:HD21	2:C:1:ITI:H6	1.96	0.47
2:A:1:ITI:H13	2:A:1:ITI:C5	2.44	0.47
1:C:881:TRP:HB2	1:C:923:MET:HE3	1.97	0.47
1:C:902:ILE:O	1:C:907:GLU:HB2	2.14	0.47
1:A:693:VAL:HG21	1:B:807:ARG:HD2	1.95	0.47
1:A:714:VAL:HA	1:A:715:LYS:HE2	1.96	0.47
1:B:881:TRP:HB2	1:B:923:MET:HE3	1.96	0.47
1:B:953:ARG:O	1:B:953:ARG:HG3	2.14	0.47
1:D:681:ARG:NH1	1:D:707:TRP:CZ3	2.83	0.47
1:D:811:HIS:O	1:D:812:ARG:HB2	2.13	0.47
1:B:918:ASP:O	1:B:922:ILE:HG13	2.15	0.47
1:C:899:ILE:O	1:C:903:LEU:HD22	2.15	0.47
1:C:925:LYS:HD3	1:C:935:PRO:HD3	1.93	0.47
1:D:782:LYS:O	1:D:886:PHE:CD1	2.67	0.47
1:A:719:ALA:CB	2:A:1:ITI:C15	2.93	0.47
1:B:791:LEU:HG	1:B:955:LEU:CD1	2.45	0.47
1:B:828:LYS:NZ	3:B:181:HOH:O	2.47	0.47
1:B:917:ILE:O	1:B:921:MET:HB2	2.15	0.47
1:C:782:LYS:O	1:C:886:PHE:CD1	2.68	0.47
1:A:782:LYS:O	1:A:886:PHE:CD1	2.68	0.47
1:B:766:THR:HG22	2:B:1:ITI:C4	2.45	0.47
2:C:1:ITI:N35	2:C:1:ITI:C26	2.78	0.47
1:A:852:VAL:HA	1:A:853:PRO:HD3	1.65	0.46
1:C:724:ARG:NH1	1:D:808:ARG:HG3	2.30	0.46
2:C:1:ITI:H12	2:C:1:ITI:H26	1.97	0.46
1:D:950:ASP:OD2	1:D:953:ARG:HD2	2.15	0.46
1:A:812:ARG:HH11	1:A:812:ARG:CG	2.22	0.46
1:B:881:TRP:HD1	1:B:923:MET:CE	2.28	0.46
1:B:881:TRP:HD1	1:B:923:MET:HE1	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:859:LEU:HD23	1:D:929:ILE:HD12	1.97	0.46
1:A:727:THR:O	1:A:728:SER:OG	2.29	0.46
1:D:736:LEU:CD2	1:D:740:TYR:CE1	2.98	0.46
1:D:812:ARG:NH1	1:D:867:TYR:HB2	2.31	0.46
1:D:936:LYS:HE2	1:D:936:LYS:HB3	1.58	0.46
1:C:766:THR:CG2	2:C:1:ITI:O41	2.63	0.46
1:C:782:LYS:HE2	1:C:782:LYS:HB2	1.51	0.46
1:B:681:ARG:NH1	1:E:10:UNK:CB	2.79	0.46
1:B:742:MET:CE	2:B:1:ITI:H1	2.46	0.46
2:B:1:ITI:N35	2:B:1:ITI:C26	2.77	0.46
1:D:682:ILE:N	1:D:682:ILE:HD12	2.31	0.46
1:C:707:TRP:CD1	1:G:12:UNK:CB	2.98	0.46
1:A:791:LEU:O	1:A:795:VAL:HG23	2.15	0.46
1:C:865:ARG:HD3	1:C:865:ARG:HA	1.40	0.46
1:A:766:THR:HG22	2:A:1:ITI:C4	2.45	0.45
1:B:681:ARG:NE	1:E:10:UNK:CB	2.79	0.45
1:B:791:LEU:HG	1:B:955:LEU:HD12	1.96	0.45
1:C:680:LEU:O	1:C:680:LEU:HG	2.14	0.45
1:C:812:ARG:NH1	1:C:867:TYR:HB2	2.31	0.45
1:C:881:TRP:CB	1:C:923:MET:HE1	2.46	0.45
1:B:830:THR:OG1	1:B:831:ASP:N	2.49	0.45
1:B:779:ARG:HD3	1:B:887:GLY:HA3	1.98	0.45
1:B:813:ASP:OD1	1:B:817:ARG:NH2	2.50	0.45
1:A:747:ASN:HB3	1:A:750:VAL:HG23	1.98	0.45
1:C:881:TRP:HD1	1:C:923:MET:CE	2.29	0.45
1:D:953:ARG:NH1	1:D:953:ARG:CG	2.78	0.45
1:B:690:LYS:NZ	1:B:763:GLN:OE1	2.50	0.45
1:B:776:ASP:HB2	3:B:99:HOH:O	2.17	0.45
1:B:807:ARG:O	1:B:808:ARG:HB2	2.17	0.45
1:D:881:TRP:CB	1:D:923:MET:HE1	2.47	0.45
1:D:881:TRP:HD1	1:D:923:MET:CE	2.30	0.45
1:B:911:GLN:HB2	1:B:920:TYR:CD2	2.51	0.45
1:A:772:GLY:HA2	2:A:1:ITI:H26	1.97	0.45
1:A:774:LEU:O	1:A:778:VAL:HG13	2.16	0.45
1:A:813:ASP:OD1	1:A:817:ARG:NH2	2.50	0.45
2:B:1:ITI:N35	2:B:1:ITI:H26	2.32	0.45
1:C:736:LEU:CD1	1:C:758:LEU:HD11	2.45	0.45
1:A:715:LYS:N	1:A:715:LYS:CD	2.80	0.45
1:A:925:LYS:HD2	1:A:935:PRO:CD	2.32	0.45
1:C:681:ARG:NH2	1:G:12:UNK:CA	2.75	0.45
1:C:724:ARG:HH11	1:D:808:ARG:HG3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:813:ASP:OD1	1:C:817:ARG:NH2	2.49	0.45
1:D:937:PHE:O	1:D:941:ILE:HG13	2.17	0.45
1:B:725:GLU:CG	1:B:726:ALA:H	2.06	0.45
1:B:782:LYS:O	1:B:886:PHE:CD1	2.70	0.45
1:A:917:ILE:O	1:A:921:MET:HB2	2.18	0.44
1:C:690:LYS:NZ	1:C:763:GLN:OE1	2.50	0.44
1:D:693:VAL:HG22	1:D:703:TYR:HE2	1.80	0.44
1:D:813:ASP:OD1	1:D:817:ARG:NH2	2.50	0.44
1:B:865:ARG:HA	1:B:865:ARG:HD3	1.41	0.44
1:D:681:ARG:HH22	1:D:707:TRP:HZ3	1.61	0.44
1:A:781:HIS:O	1:A:785:ILE:HG13	2.18	0.44
1:B:781:HIS:HB2	1:B:785:ILE:HD11	2.00	0.44
1:B:925:LYS:HD2	1:B:935:PRO:CD	2.32	0.44
1:A:720:ILE:CG1	1:A:765:ILE:HD12	2.47	0.44
1:C:925:LYS:O	1:C:928:MET:HG2	2.18	0.44
1:C:937:PHE:O	1:C:941:ILE:HG13	2.18	0.44
2:A:1:ITI:H30A	2:A:1:ITI:H9	1.52	0.44
1:A:716:ILE:HA	1:A:717:PRO:HD3	1.88	0.44
1:A:865:ARG:HA	1:A:865:ARG:HD3	1.41	0.44
1:A:946:LYS:HA	1:A:949:ARG:CZ	2.48	0.44
1:C:706:LEU:HD23	1:C:706:LEU:HA	1.65	0.44
1:D:834:LEU:CD2	2:D:1:ITI:C1	2.94	0.44
1:F:8:UNK:O	1:F:11:UNK:N	2.51	0.44
1:C:946:LYS:HA	1:C:949:ARG:CZ	2.48	0.43
1:D:782:LYS:HE2	1:D:782:LYS:HB2	1.52	0.43
1:D:919:VAL:CG2	1:D:947:MET:CE	2.96	0.43
1:A:782:LYS:HZ1	1:B:946:LYS:HD2	1.82	0.43
1:D:925:LYS:HD2	1:D:935:PRO:CD	2.33	0.43
1:A:715:LYS:H	1:A:715:LYS:CD	2.31	0.43
1:B:925:LYS:HD3	1:B:935:PRO:HD3	1.93	0.43
1:D:858:ALA:HA	1:D:874:TRP:CD2	2.53	0.43
1:F:8:UNK:C	1:F:12:UNK:CB	2.96	0.43
1:A:721:LYS:HB2	2:A:1:ITI:C5	2.49	0.43
1:A:811:HIS:CD2	1:A:832:PHE:HB3	2.54	0.43
1:A:781:HIS:HB2	1:A:785:ILE:HD11	1.99	0.43
1:B:812:ARG:NH1	1:B:867:TYR:HB2	2.33	0.43
1:C:774:LEU:O	1:C:778:VAL:HG13	2.18	0.43
1:D:684:LYS:H	1:D:687:GLU:CG	2.26	0.43
1:D:736:LEU:HD23	1:D:740:TYR:CE1	2.54	0.43
1:D:853:PRO:HB2	1:D:856:TRP:HB2	1.99	0.43
1:C:936:LYS:HE2	1:C:936:LYS:HB3	1.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1:ITI:H9	2:C:1:ITI:H30	1.87	0.43
1:A:691:ILE:CD1	1:A:706:LEU:HG	2.41	0.43
1:A:756:ILE:HG13	1:A:764:LEU:HD23	2.01	0.43
1:B:881:TRP:CB	1:B:923:MET:HE1	2.49	0.43
1:D:771:PHE:HB3	1:D:821:VAL:HB	2.01	0.43
1:D:914:ILE:HG13	1:D:955:LEU:HD23	1.92	0.43
1:D:924:ARG:O	1:D:924:ARG:NH1	2.52	0.43
1:A:859:LEU:HD23	1:A:929:ILE:CD1	2.49	0.43
1:D:834:LEU:CD2	2:D:1:ITI:C3	2.97	0.43
1:D:834:LEU:CD2	2:D:1:ITI:H3	2.43	0.43
1:B:720:ILE:CG1	1:B:765:ILE:HD12	2.49	0.43
1:C:947:MET:HG2	1:C:954:TYR:CD2	2.52	0.43
1:H:9:UNK:O	1:H:13:UNK:N	2.52	0.43
1:C:881:TRP:HD1	1:C:923:MET:HE1	1.83	0.42
1:C:881:TRP:HA	1:C:923:MET:HE1	2.01	0.42
1:D:946:LYS:HA	1:D:949:ARG:CZ	2.49	0.42
1:A:858:ALA:HA	1:A:874:TRP:CD2	2.53	0.42
1:A:881:TRP:HD1	1:A:923:MET:CE	2.31	0.42
1:A:779:ARG:HD3	1:A:887:GLY:HA3	2.02	0.42
1:D:706:LEU:HD23	1:D:706:LEU:HA	1.64	0.42
1:D:769:MET:O	2:D:1:ITI:N39	2.36	0.42
1:B:936:LYS:HB3	1:B:936:LYS:HE2	1.59	0.42
1:C:680:LEU:HD23	1:C:740:TYR:CD2	2.54	0.42
1:D:917:ILE:O	1:D:921:MET:HB2	2.19	0.42
2:B:1:ITI:H29A	2:B:1:ITI:H8	1.59	0.42
1:C:770:PRO:HG2	1:C:771:PHE:CD2	2.54	0.42
1:A:693:VAL:HG22	1:A:703:TYR:HE2	1.78	0.42
1:B:921:MET:HG3	1:C:898:GLU:CD	2.40	0.42
1:B:946:LYS:HA	1:B:949:ARG:CZ	2.49	0.42
1:B:858:ALA:HA	1:B:874:TRP:CD2	2.54	0.42
1:B:924:ARG:O	1:B:924:ARG:NH1	2.52	0.42
1:C:881:TRP:CD1	1:C:923:MET:CE	3.02	0.42
1:B:881:TRP:CD1	1:B:923:MET:CE	3.02	0.42
1:C:756:ILE:HA	1:C:763:GLN:O	2.19	0.42
1:D:900:SER:OG	1:D:901:SER:N	2.52	0.42
1:C:852:VAL:CG2	1:C:854:ILE:CD1	2.98	0.42
1:D:774:LEU:O	1:D:778:VAL:HG13	2.19	0.42
1:D:953:ARG:HG3	1:D:953:ARG:HH11	1.80	0.42
1:A:719:ALA:HB2	1:A:768:LEU:HA	2.02	0.41
1:B:742:MET:HE2	1:B:832:PHE:O	2.19	0.41
1:B:776:ASP:CB	3:B:99:HOH:O	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:787:SER:OG	1:B:951:PRO:CB	2.68	0.41
1:D:715:LYS:C	1:D:716:ILE:HD13	2.40	0.41
1:D:791:LEU:O	1:D:795:VAL:HG23	2.19	0.41
1:B:853:PRO:HB2	1:B:856:TRP:HB2	2.02	0.41
1:D:735:ILE:O	1:D:738:GLU:N	2.51	0.41
1:B:947:MET:HB3	1:B:954:TYR:CD1	2.56	0.41
1:D:852:VAL:HG23	1:D:857:MET:SD	2.61	0.41
1:B:704:LYS:HE2	1:B:704:LYS:HB2	1.80	0.41
1:C:704:LYS:HE2	1:C:704:LYS:HB2	1.86	0.41
1:C:791:LEU:O	1:C:794:CYS:HB2	2.21	0.41
2:D:1:ITI:H30	2:D:1:ITI:H9	1.76	0.41
1:C:754:LEU:HD11	1:G:9:UNK:CB	2.50	0.41
1:D:881:TRP:HA	1:D:923:MET:HE1	2.02	0.41
1:A:807:ARG:O	1:A:808:ARG:HB2	2.21	0.41
1:D:899:ILE:HG22	1:D:903:LEU:CD2	2.51	0.41
1:B:704:LYS:HD3	1:B:768:LEU:HD21	2.02	0.41
1:B:766:THR:HG22	2:B:1:ITI:C10	2.51	0.41
1:A:691:ILE:HD13	1:A:706:LEU:CG	2.42	0.41
1:A:834:LEU:HD22	1:A:834:LEU:HA	1.86	0.41
1:C:858:ALA:HA	1:C:874:TRP:CD2	2.55	0.41
1:C:917:ILE:O	1:C:921:MET:HB2	2.20	0.41
1:D:719:ALA:HB2	1:D:768:LEU:HA	2.02	0.41
1:D:756:ILE:HD11	1:D:758:LEU:HD21	2.03	0.41
1:D:881:TRP:CD1	1:D:923:MET:CE	3.03	0.41
1:C:811:HIS:O	1:C:812:ARG:HB2	2.20	0.41
1:B:682:ILE:HD12	1:B:682:ILE:N	2.37	0.40
1:B:852:VAL:CG2	1:B:854:ILE:CD1	2.99	0.40
1:C:790:LEU:HA	1:C:790:LEU:HD23	1.82	0.40
1:D:857:MET:HB3	1:D:861:SER:HB3	2.03	0.40
1:A:881:TRP:CD1	1:A:923:MET:CE	3.03	0.40
2:A:1:ITI:C5	2:A:1:ITI:C13	2.99	0.40
1:C:852:VAL:HG23	1:C:857:MET:SD	2.61	0.40
1:D:899:ILE:CG2	1:D:903:LEU:CD2	3.00	0.40
2:A:1:ITI:C16	2:A:1:ITI:C13	2.98	0.40
1:G:8:UNK:O	1:G:12:UNK:C	2.69	0.40
1:A:721:LYS:NZ	2:A:1:ITI:N36	2.69	0.40
1:A:782:LYS:NZ	1:B:946:LYS:CD	2.84	0.40
1:A:861:SER:O	1:A:865:ARG:NE	2.49	0.40
1:D:720:ILE:CG1	1:D:765:ILE:HD12	2.51	0.40
2:D:1:ITI:H8	2:D:1:ITI:H29A	1.78	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	261/327 (80%)	245 (94%)	12 (5%)	4 (2%)	10	26
1	B	261/327 (80%)	247 (95%)	11 (4%)	3 (1%)	14	34
1	C	253/327 (77%)	243 (96%)	9 (4%)	1 (0%)	34	60
1	D	255/327 (78%)	240 (94%)	14 (6%)	1 (0%)	34	60
All	All	1030/1308 (79%)	975 (95%)	46 (4%)	9 (1%)	17	40

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	728	SER
1	A	729	PRO
1	B	728	SER
1	B	729	PRO
1	B	784	ASN
1	A	812	ARG
1	A	782	LYS
1	C	782	LYS
1	D	782	LYS

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	233/251 (93%)	195 (84%)	38 (16%)	2	6
1	B	232/251 (92%)	199 (86%)	33 (14%)	3	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	228/251 (91%)	191 (84%)	37 (16%)	2	6
1	D	228/251 (91%)	188 (82%)	40 (18%)	2	4
All	All	921/1004 (92%)	773 (84%)	148 (16%)	2	6

All (148) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	679	LEU
1	A	687	GLU
1	A	689	LYS
1	A	690	LYS
1	A	691	ILE
1	A	704	LYS
1	A	710	GLU
1	A	712	GLU
1	A	715	LYS
1	A	727	THR
1	A	730	LYS
1	A	736	LEU
1	A	738	GLU
1	A	742	MET
1	A	752	ARG
1	A	760	SER
1	A	779	ARG
1	A	782	LYS
1	A	784	ASN
1	A	787	SER
1	A	822	LYS
1	A	825	GLN
1	A	834	LEU
1	A	851	LYS
1	A	852	VAL
1	A	865	ARG
1	A	870	GLN
1	A	901	SER
1	A	903	LEU
1	A	907	GLU
1	A	908	ARG
1	A	914	ILE
1	A	917	ILE
1	A	918	ASP

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Mol	Chain	Res	Type
1	A	921	MET
1	A	925	LYS
1	A	936	LYS
1	A	953	ARG
1	B	679	LEU
1	B	681	ARG
1	B	689	LYS
1	B	704	LYS
1	B	710	GLU
1	B	712	GLU
1	B	724	ARG
1	B	727	THR
1	B	736	LEU
1	B	738	GLU
1	B	752	ARG
1	B	760	SER
1	B	779	ARG
1	B	782	LYS
1	B	787	SER
1	B	812	ARG
1	B	825	GLN
1	B	851	LYS
1	B	865	ARG
1	B	870	GLN
1	B	900	SER
1	B	901	SER
1	B	902	ILE
1	B	903	LEU
1	B	914	ILE
1	B	917	ILE
1	B	918	ASP
1	B	921	MET
1	B	925	LYS
1	B	928	MET
1	B	936	LYS
1	B	946	LYS
1	B	953	ARG
1	C	680	LEU
1	C	681	ARG
1	C	687	GLU
1	C	689	LYS
1	C	704	LYS

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Mol	Chain	Res	Type
1	C	710	GLU
1	C	712	GLU
1	C	715	LYS
1	C	724	ARG
1	C	736	LEU
1	C	738	GLU
1	C	742	MET
1	C	752	ARG
1	C	760	SER
1	C	779	ARG
1	C	782	LYS
1	C	784	ASN
1	C	812	ARG
1	C	822	LYS
1	C	825	GLN
1	C	834	LEU
1	C	865	ARG
1	C	870	GLN
1	C	889	LYS
1	C	901	SER
1	C	902	ILE
1	C	903	LEU
1	C	907	GLU
1	C	914	ILE
1	C	917	ILE
1	C	918	ASP
1	C	921	MET
1	C	925	LYS
1	C	936	LYS
1	C	938	ARG
1	C	953	ARG
1	C	958	GLN
1	D	679	LEU
1	D	681	ARG
1	D	689	LYS
1	D	704	LYS
1	D	707	TRP
1	D	712	GLU
1	D	714	VAL
1	D	715	LYS
1	D	716	ILE
1	D	724	ARG

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Mol	Chain	Res	Type
1	D	736	LEU
1	D	738	GLU
1	D	752	ARG
1	D	753	LEU
1	D	756	ILE
1	D	760	SER
1	D	779	ARG
1	D	782	LYS
1	D	784	ASN
1	D	787	SER
1	D	812	ARG
1	D	825	GLN
1	D	834	LEU
1	D	851	LYS
1	D	861	SER
1	D	865	ARG
1	D	870	GLN
1	D	889	LYS
1	D	901	SER
1	D	902	ILE
1	D	903	LEU
1	D	907	GLU
1	D	914	ILE
1	D	917	ILE
1	D	918	ASP
1	D	921	MET
1	D	925	LYS
1	D	928	MET
1	D	936	LYS
1	D	953	ARG

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

Mol	Chain	Res	Type
1	A	784	ASN
1	A	802	ASN
1	A	869	HIS
1	B	781	HIS
1	C	781	HIS
1	C	784	ASN
1	C	802	ASN
1	D	781	HIS

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Mol	Chain	Res	Type
1	D	784	ASN
1	D	802	ASN

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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

4 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	ITI	B	1	-	41,49,49	0.99	3 (7%)	49,68,68	1.86	10 (20%)
2	ITI	A	1	-	41,49,49	1.06	4 (9%)	49,68,68	1.88	14 (28%)
2	ITI	D	1	-	41,49,49	0.85	3 (7%)	49,68,68	1.43	5 (10%)
2	ITI	C	1	-	41,49,49	1.02	2 (4%)	49,68,68	1.69	8 (16%)

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	ITI	B	1	-	-	3/16/32/32	0/7/7/7
2	ITI	A	1	-	-	2/16/32/32	0/7/7/7
2	ITI	D	1	-	-	2/16/32/32	0/7/7/7
2	ITI	C	1	-	-	4/16/32/32	0/7/7/7

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	1	ITI	C13-C21	-3.15	1.36	1.41
2	A	1	ITI	C21-N35	-2.84	1.32	1.37
2	B	1	ITI	C13-C21	-2.83	1.37	1.41
2	C	1	ITI	C24-N39	2.67	1.41	1.36
2	A	1	ITI	C13-C21	-2.57	1.37	1.41
2	A	1	ITI	C30-N38	-2.43	1.42	1.46
2	B	1	ITI	C21-N35	-2.40	1.33	1.37
2	D	1	ITI	C13-C21	-2.35	1.37	1.41
2	D	1	ITI	C21-N35	-2.18	1.34	1.37
2	A	1	ITI	C14-C16	-2.15	1.37	1.42
2	D	1	ITI	C24-N39	2.09	1.40	1.36
2	B	1	ITI	C24-N39	2.02	1.40	1.36

All (37) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1	ITI	C30-N38-C29	6.02	124.81	111.52
2	B	1	ITI	C15-C13-C21	-6.01	114.17	119.31
2	D	1	ITI	C30-N38-C29	5.23	123.06	111.52
2	C	1	ITI	C20-N40-C28	-4.91	118.90	127.50
2	A	1	ITI	C32-C30-N38	-4.47	101.77	110.02
2	D	1	ITI	C15-C13-C21	-4.40	115.55	119.31
2	A	1	ITI	C30-N38-C29	4.38	121.18	111.52
2	C	1	ITI	C30-N38-C29	4.22	120.84	111.52
2	A	1	ITI	C9-C18-N38	-4.19	115.60	121.38
2	A	1	ITI	C15-C13-C21	-4.12	115.79	119.31
2	A	1	ITI	C15-N34-C24	4.07	119.06	115.45
2	C	1	ITI	C15-C13-C21	-3.48	116.33	119.31
2	C	1	ITI	N34-C24-N35	-3.42	123.21	126.52
2	C	1	ITI	C15-N34-C24	3.38	118.45	115.45
2	B	1	ITI	C33-C28-N40	-3.17	108.21	114.77
2	B	1	ITI	C14-C16-C5	3.09	121.99	118.15
2	B	1	ITI	C13-C21-N35	3.06	125.49	121.46
2	B	1	ITI	C8-C18-N38	-3.04	117.19	121.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1	ITI	C33-C28-N40	-2.98	108.61	114.77
2	B	1	ITI	C23-C22-N36	2.85	114.14	108.12
2	B	1	ITI	O41-C28-N40	2.85	128.83	123.63
2	A	1	ITI	C13-C15-N34	-2.83	121.02	123.81
2	A	1	ITI	O41-C28-N40	2.79	128.71	123.63
2	A	1	ITI	N34-C24-N35	-2.70	123.91	126.52
2	C	1	ITI	C8-C18-N38	-2.59	117.80	121.38
2	C	1	ITI	C32-C30-N38	-2.49	105.43	110.02
2	A	1	ITI	C13-C21-N35	2.48	124.73	121.46
2	A	1	ITI	C33-C17-C7	-2.47	117.35	120.89
2	D	1	ITI	C14-C16-C5	2.42	121.16	118.15
2	B	1	ITI	N34-C24-N35	-2.37	124.23	126.52
2	B	1	ITI	C15-N34-C24	2.33	117.52	115.45
2	D	1	ITI	N34-C24-N35	-2.32	124.28	126.52
2	A	1	ITI	C20-N40-C28	-2.29	123.50	127.50
2	C	1	ITI	C31-C29-N38	-2.25	105.87	110.02
2	A	1	ITI	C12-C9-C18	-2.14	117.50	120.32
2	D	1	ITI	C23-C22-N36	2.11	112.58	108.12
2	A	1	ITI	C31-C29-N38	-2.06	106.23	110.02

There are no chirality outliers.

All (11) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	C	1	ITI	C33-C28-N40-C20
2	C	1	ITI	O41-C28-N40-C20
2	C	1	ITI	C6-C17-C33-C28
2	C	1	ITI	C7-C17-C33-C28
2	A	1	ITI	C6-C17-C33-C28
2	A	1	ITI	C7-C17-C33-C28
2	B	1	ITI	C6-C17-C33-C28
2	B	1	ITI	C7-C17-C33-C28
2	D	1	ITI	C7-C17-C33-C28
2	D	1	ITI	C6-C17-C33-C28
2	B	1	ITI	O41-C28-N40-C20

There are no ring outliers.

4 monomers are involved in 59 short contacts:

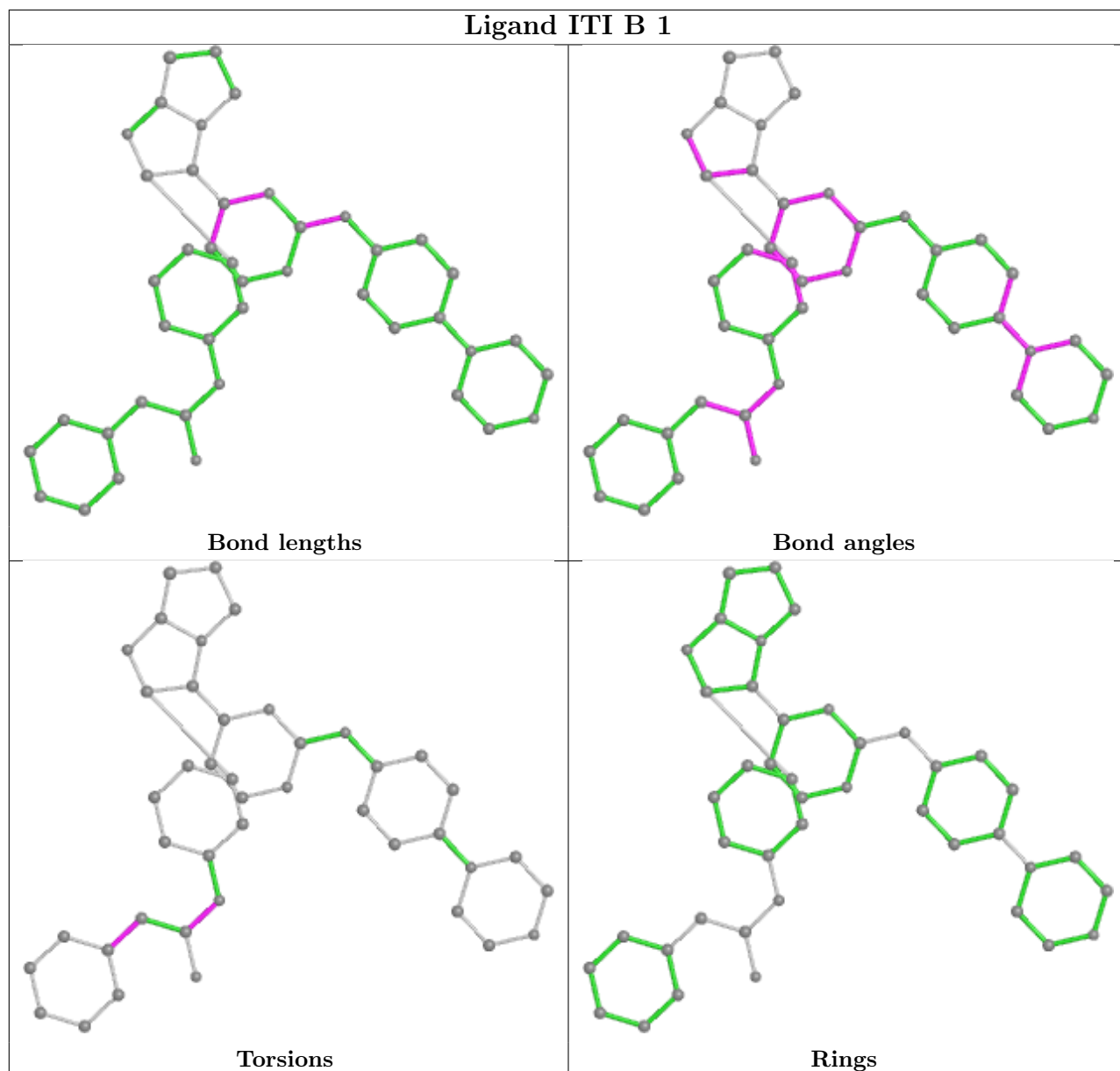
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	1	ITI	11	0

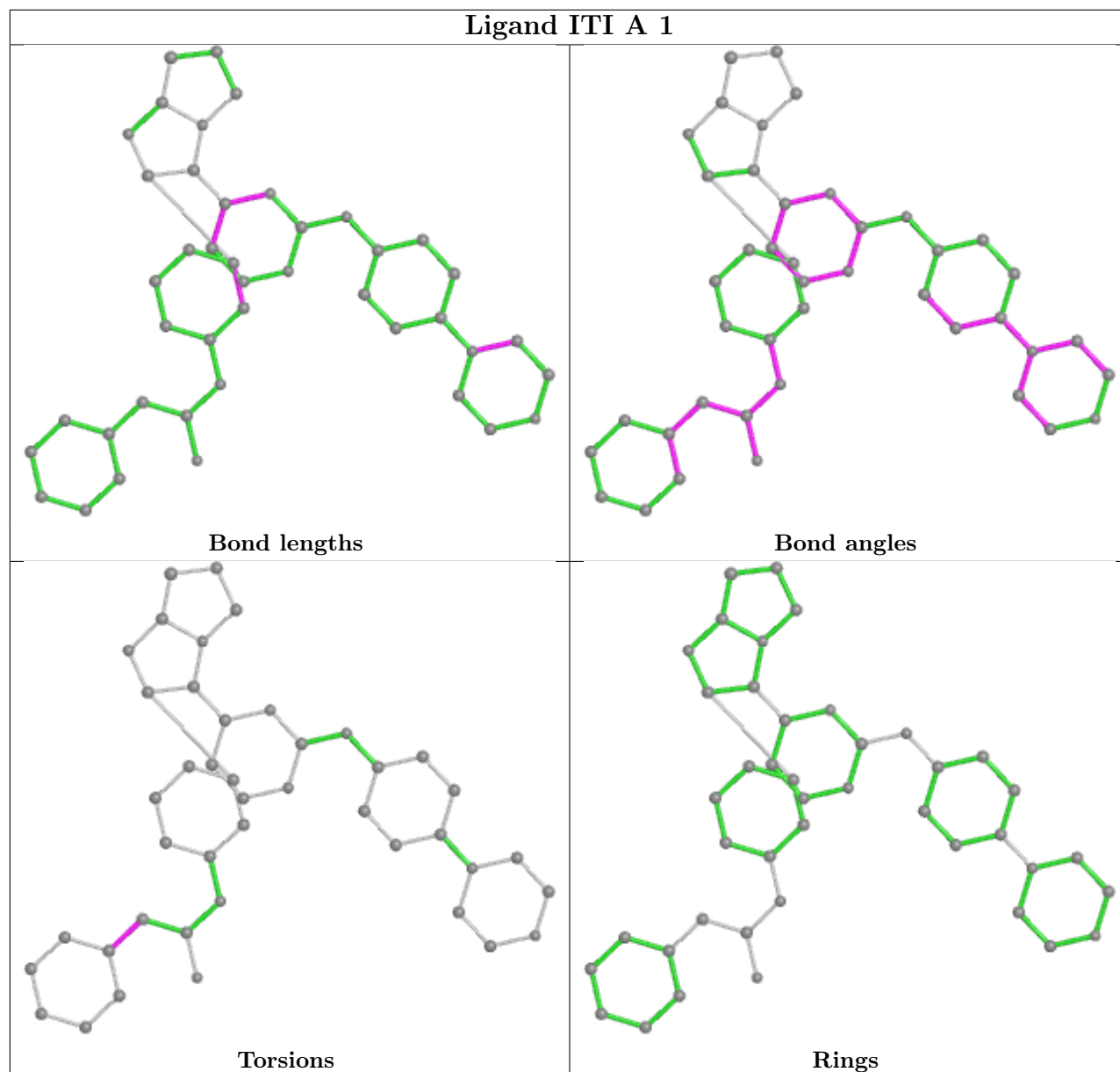
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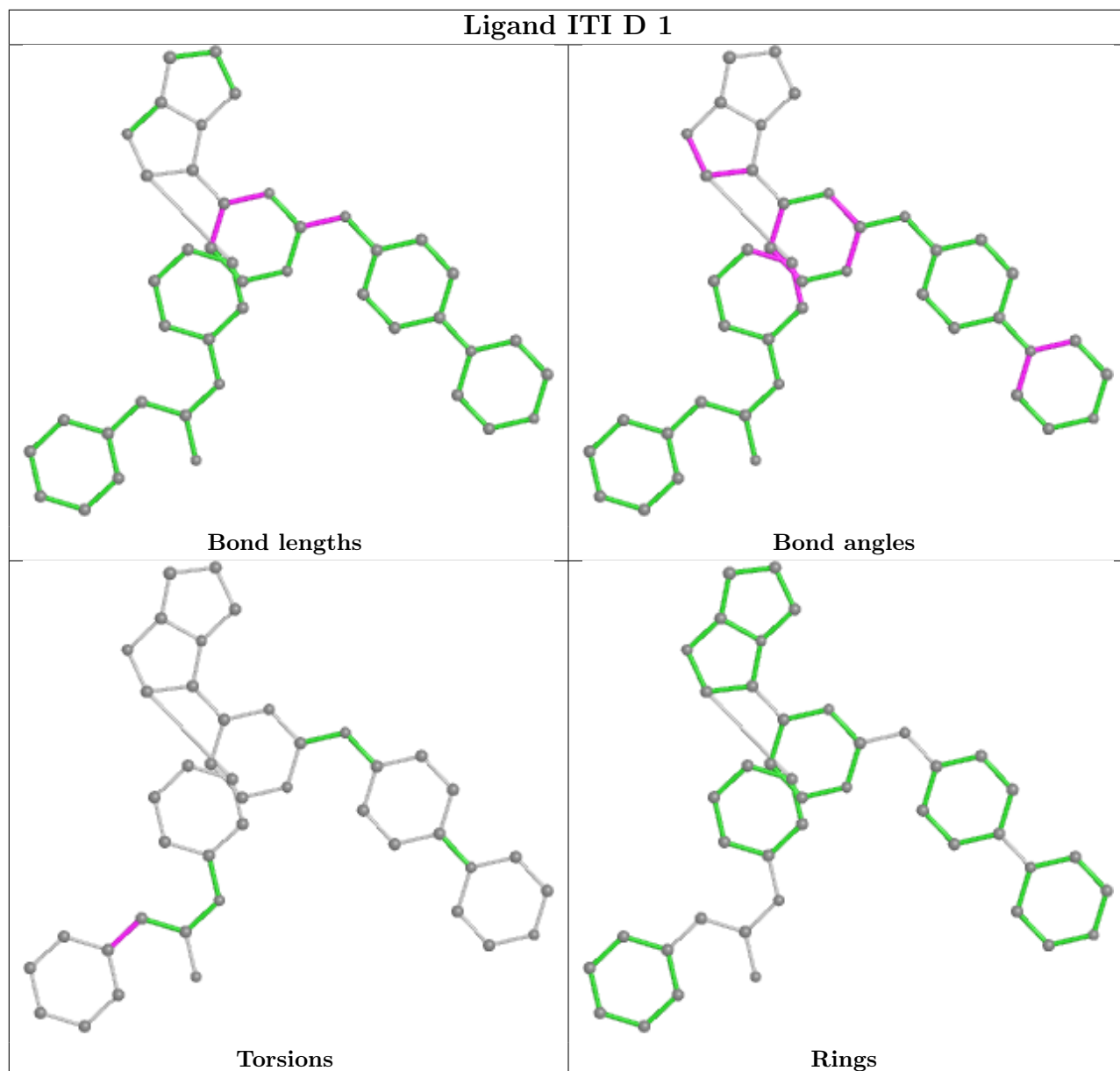
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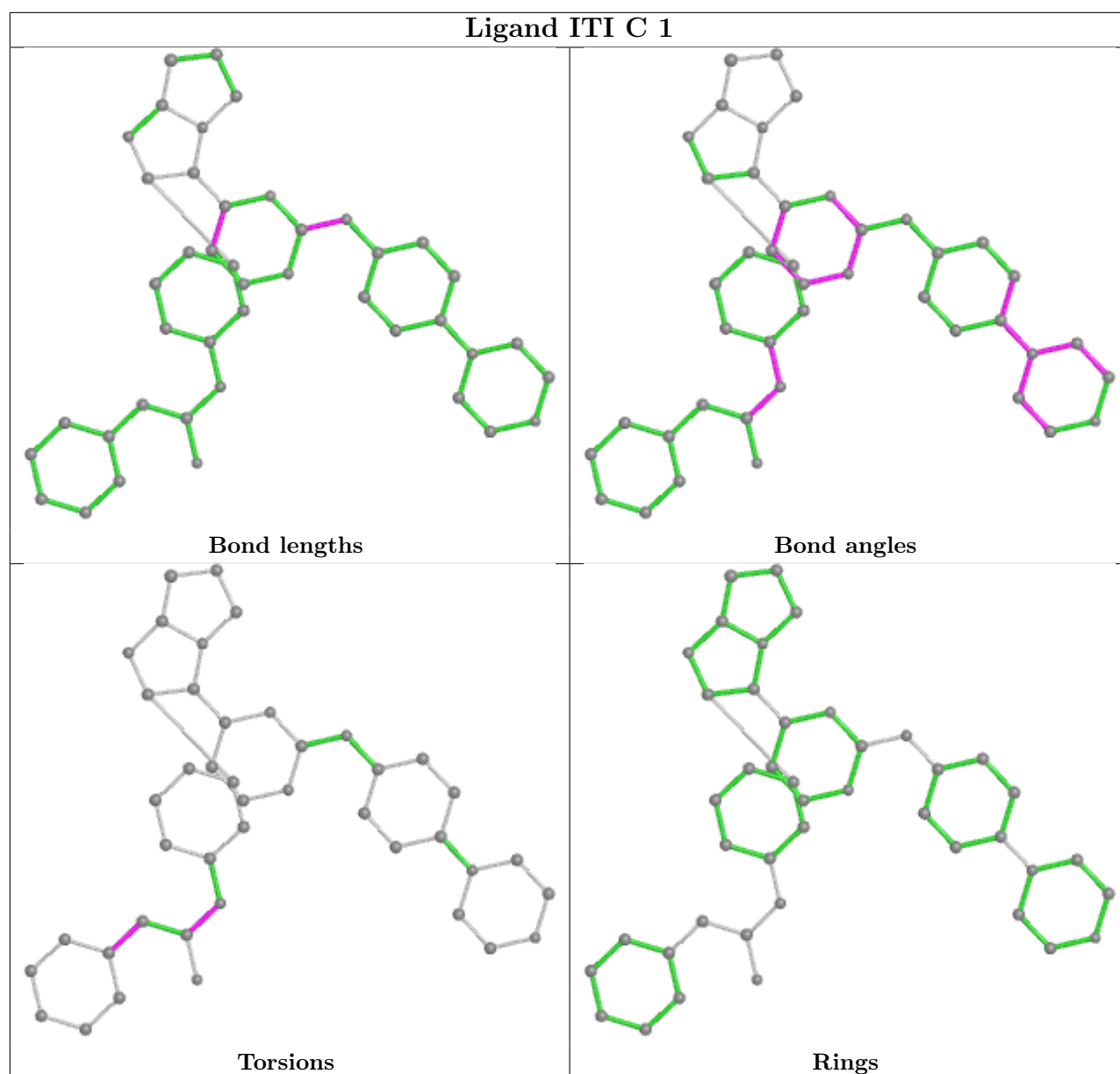
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	1	ITI	16	0
2	D	1	ITI	19	0
2	C	1	ITI	13	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.









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	265/327 (81%)	-0.03	6 (2%) 60 62	27, 47, 80, 117	0
1	B	265/327 (81%)	-0.11	2 (0%) 86 87	27, 45, 79, 112	0
1	C	259/327 (79%)	0.23	16 (6%) 20 19	39, 60, 93, 130	0
1	D	261/327 (79%)	0.36	20 (7%) 13 11	41, 64, 97, 136	0
1	E	0/327	-	-	-	-
1	F	0/327	-	-	-	-
1	G	0/327	-	-	-	-
1	H	0/327	-	-	-	-
All	All	1050/2616 (40%)	0.11	44 (4%) 36 35	27, 56, 92, 136	0

All (44) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	728	SER	6.3
1	B	727	THR	5.7
1	C	735	ILE	5.6
1	A	699	PHE	5.5
1	A	726	ALA	5.4
1	A	760	SER	5.4
1	D	957	ILE	5.0
1	D	730	LYS	4.7
1	D	698	ALA	4.4
1	D	758	LEU	4.0
1	D	731	ALA	4.0
1	D	699	PHE	3.9
1	C	758	LEU	3.9
1	A	725	GLU	3.9
1	C	959	GLY	3.8
1	C	736	LEU	3.6
1	C	734	GLU	3.6

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Mol	Chain	Res	Type	RSRZ
1	C	784	ASN	3.4
1	D	760	SER	3.4
1	D	732	ASN	3.3
1	C	733	LYS	3.2
1	D	679	LEU	3.2
1	C	740	TYR	3.1
1	D	723	LEU	3.1
1	D	725	GLU	2.9
1	D	854	ILE	2.8
1	D	789	TYR	2.8
1	D	724	ARG	2.7
1	D	958	GLN	2.7
1	D	761	THR	2.7
1	C	741	VAL	2.6
1	C	724	ARG	2.5
1	C	699	PHE	2.5
1	D	959	GLY	2.4
1	C	946	LYS	2.4
1	D	756	ILE	2.4
1	C	739	ALA	2.3
1	C	732	ASN	2.3
1	A	727	THR	2.2
1	C	851	LYS	2.1
1	A	735	ILE	2.1
1	D	783	ASP	2.1
1	C	682	ILE	2.1
1	D	953	ARG	2.1

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

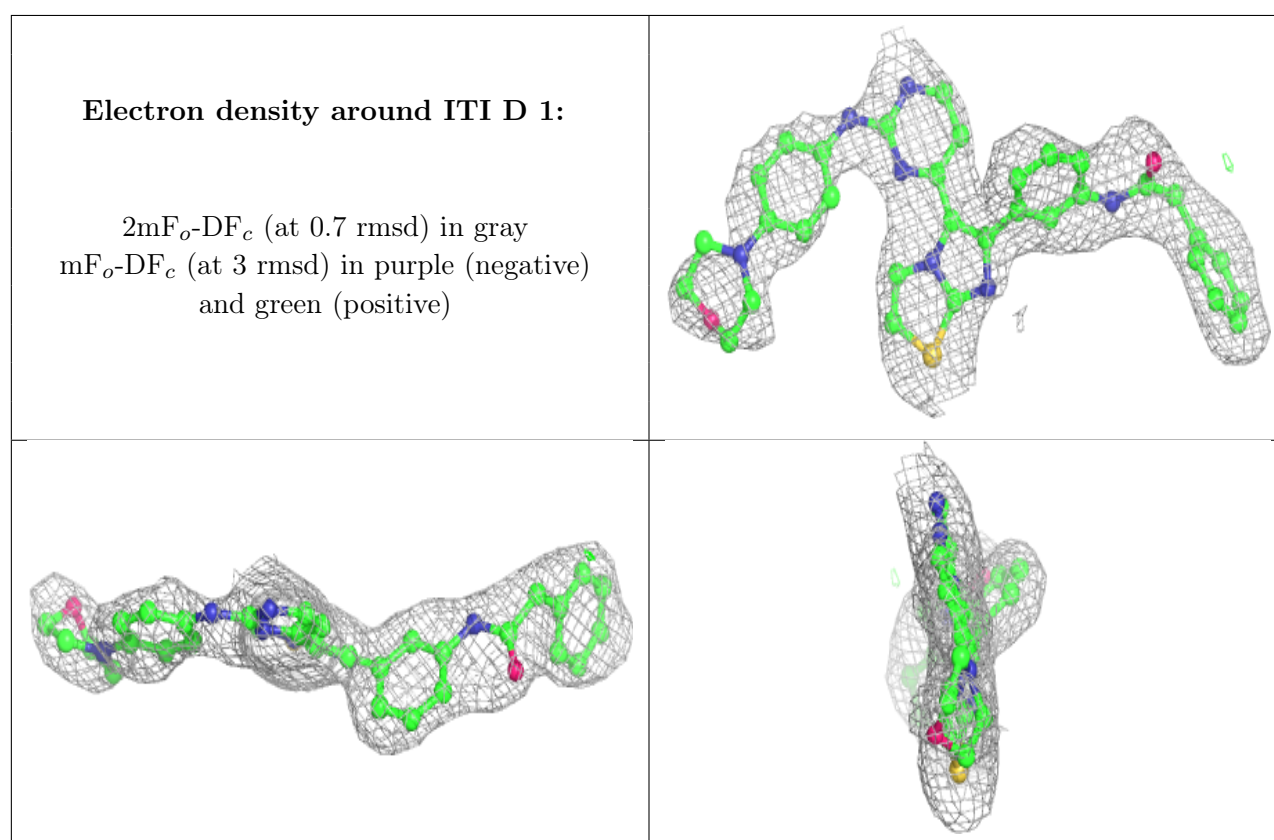
6.4 Ligands [i](#)

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.

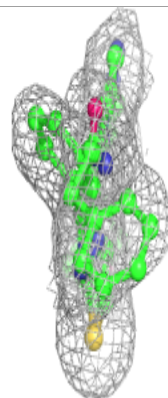
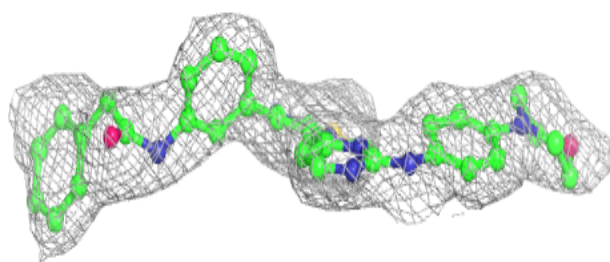
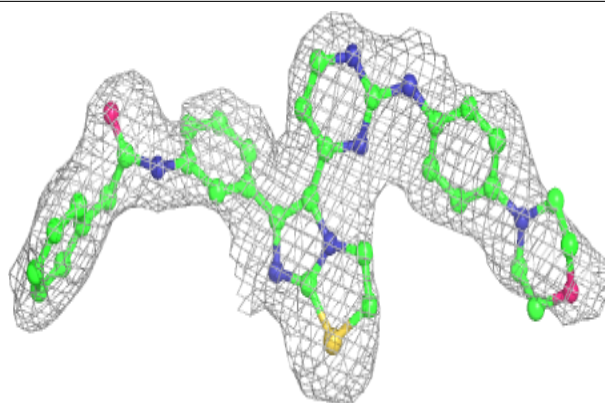
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	ITI	D	1	43/43	0.94	0.18	14,57,195,300	0
2	ITI	C	1	43/43	0.96	0.15	23,56,210,300	0
2	ITI	A	1	43/43	0.97	0.16	11,36,81,106	0
2	ITI	B	1	43/43	0.98	0.14	6,33,79,236	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

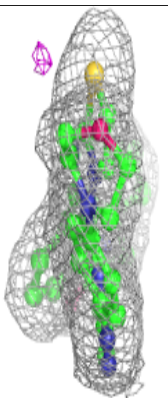
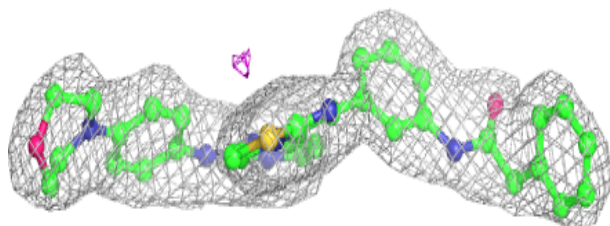
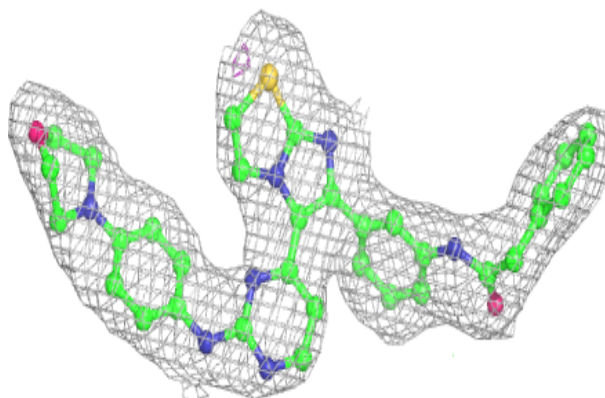


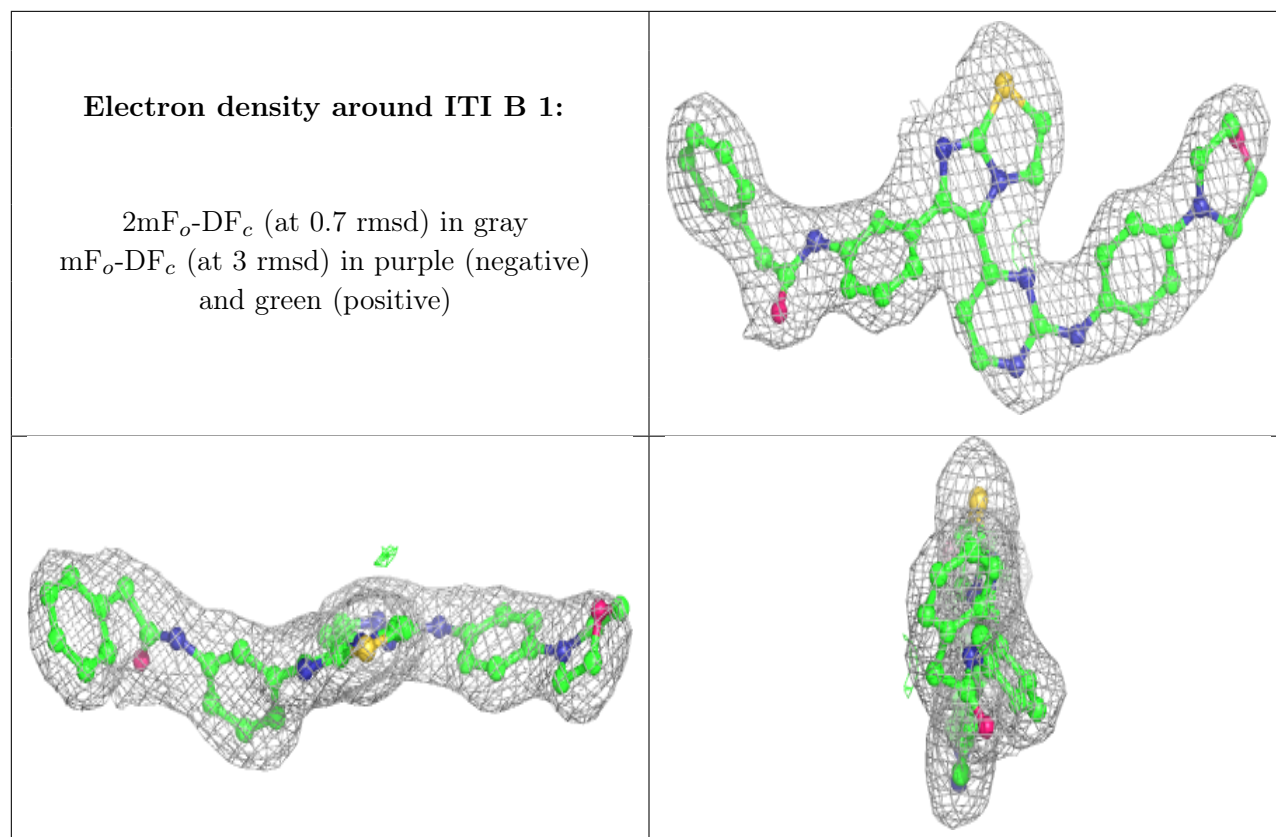
Electron density around ITI C 1:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around ITI A 1:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





6.5 Other polymers [i](#)

There are no such residues in this entry.