



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 10, 2026 – 08:53 AM UTC

PDB ID : 4KDP / pdb_00004kdp
Title : TcaR-ssDNA complex crystal structure reveals the novel ssDNA binding mechanism of the MarR family proteins
Authors : Chang, Y.M.; Chen, C.K.-M.; Wang, A.H.-J.
Deposited on : 2013-04-25
Resolution : 3.60 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

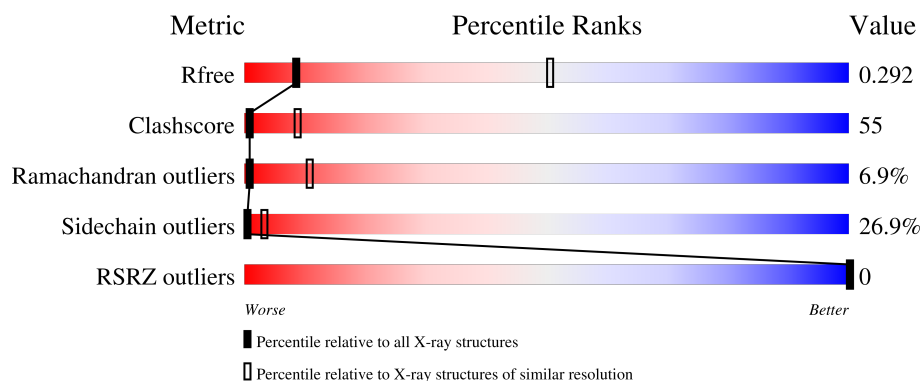
1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.60 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1747 (3.70-3.50)
Clashscore	190562	1827 (3.70-3.50)
Ramachandran outliers	187476	1773 (3.70-3.50)
Sidechain outliers	187428	1772 (3.70-3.50)
RSRZ outliers	180081	1745 (3.70-3.50)

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	151	19% 59% 19% .
1	B	151	26% 54% 16% 5%
1	C	151	23% 48% 25% .
1	D	151	25% 44% 27% .
1	E	151	20% 50% 26% ..

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	F	151	23%55%20%
1	G	151	21%46%30%
2	H	17	35%29%35%
2	J	17	24%35%41%

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 9084 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 TcaR transcription regulator.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	151	Total	C	N	O	S	0	0	0
			1216	766	214	232	4			
1	B	151	Total	C	N	O	S	0	0	0
			1217	766	214	233	4			
1	C	151	Total	C	N	O	S	0	0	0
			1217	766	214	233	4			
1	D	151	Total	C	N	O	S	0	0	0
			1217	766	214	233	4			
1	E	150	Total	C	N	O	S	0	0	0
			1208	760	213	231	4			
1	F	151	Total	C	N	O	S	0	0	0
			1217	766	214	233	4			
1	G	151	Total	C	N	O	S	0	0	0
			1217	766	214	233	4			

- Molecule 2 is a DNA chain called DNA (5'-D(*CP*GP*CP*AP*GP*CP*GP*CP*GP*CP*AP*GP*CP*CP*CP*TP*A)-3').

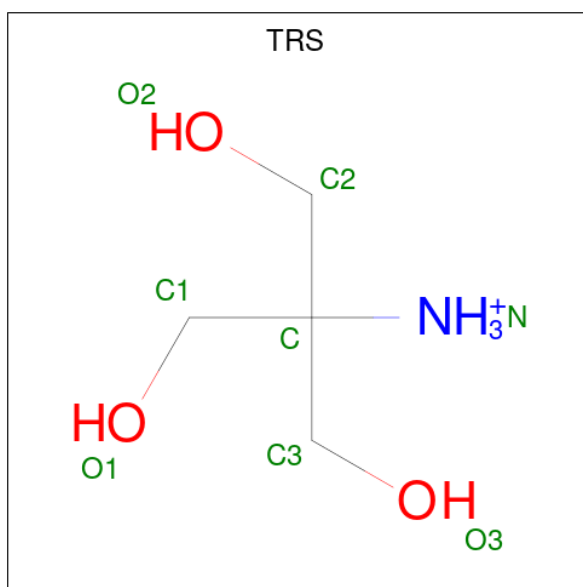
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	H	11	Total	C	N	O	P	0	0	0
			222	105	45	62	10			
2	J	10	Total	C	N	O	P	0	0	0
			198	94	38	57	9			

- Molecule 3 is 1,2-ETHANEDIOL (CCD ID: EDO) (formula: C₂H₆O₂).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	B	1	Total	C	O	0	0
			4	2	2		
3	B	1	Total	C	O	0	0
			4	2	2		
3	E	1	Total	C	O	0	0
			4	2	2		
3	F	1	Total	C	O	0	0
			4	2	2		
3	H	1	Total	C	O	0	0
			4	2	2		
3	H	1	Total	C	O	0	0
			4	2	2		

- Molecule 4 is 2-AMINO-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (CCD ID: TRS) (formula: $C_4H_{12}NO_3$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	B	1	Total	C	N	O	0	0
			8	4	1	3		
4	F	1	Total	C	N	O	0	0
			8	4	1	3		
4	H	1	Total	C	N	O	0	0
			8	4	1	3		
4	J	1	Total	C	N	O	0	0
			8	4	1	3		
4	J	1	Total	C	N	O	0	0
			8	4	1	3		

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	9	Total	O	0	0
			9	9		
5	B	8	Total	O	0	0
			8	8		
5	C	16	Total	O	0	0
			16	16		
5	D	16	Total	O	0	0
			16	16		
5	E	7	Total	O	0	0
			7	7		
5	F	7	Total	O	0	0
			7	7		
5	G	10	Total	O	0	0
			10	10		

Continued on next page...

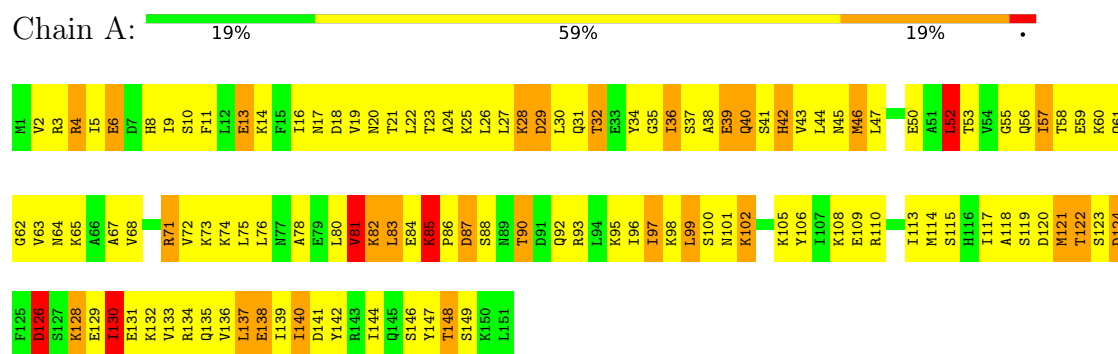
Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	H	8	Total	O	0	0
			8	8		
5	J	10	Total	O	0	0
			10	10		

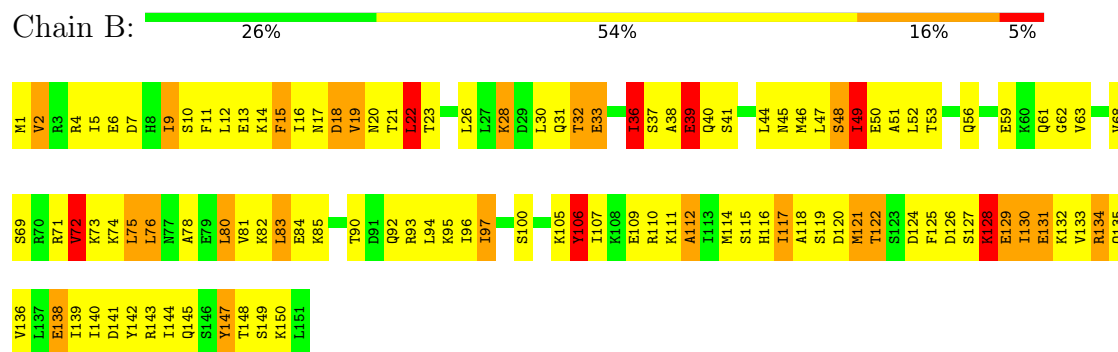
3 Residue-property plots

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.

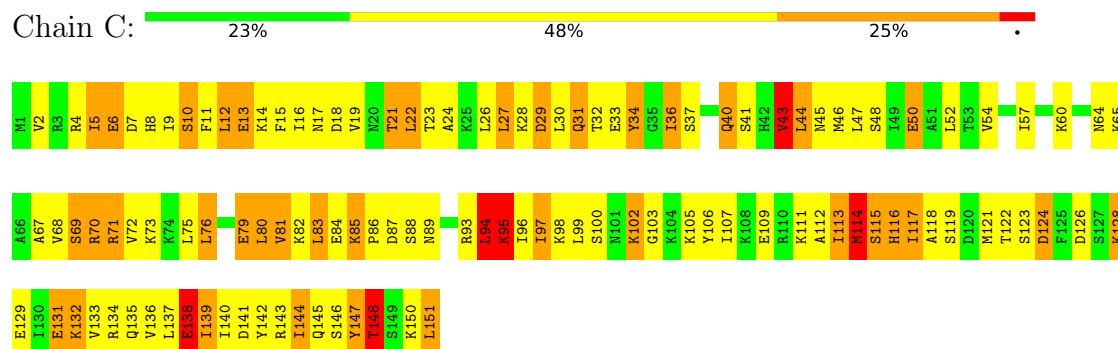
• Molecule 1: TcaR transcription regulator



• Molecule 1: TcaR transcription regulator



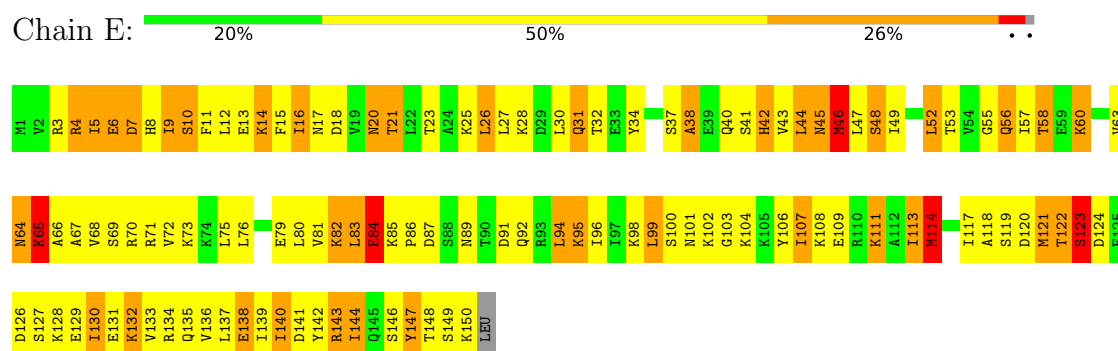
• Molecule 1: TcaR transcription regulator



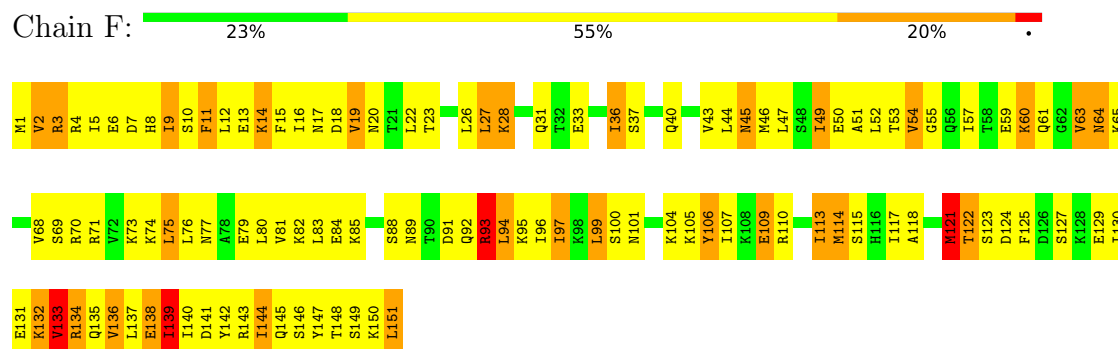
- Molecule 1: TcaR transcription regulator



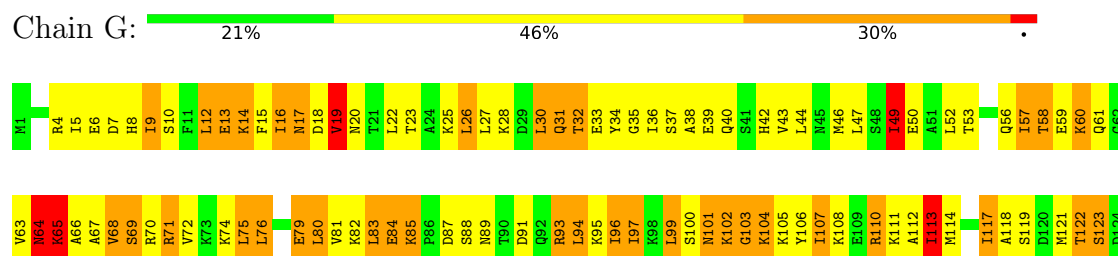
- Molecule 1: TcaR transcription regulator

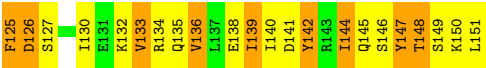


- Molecule 1: TcaR transcription regulator



- Molecule 1: TcaR transcription regulator

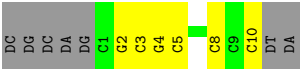
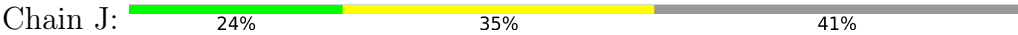




● Molecule 2: DNA (5'-D(*CP*GP*CP*AP*GP*CP*GP*CP*GP*CP*AP*GP*CP*CP*CP*TP
*A)-3')



● Molecule 2: DNA (5'-D(*CP*GP*CP*AP*GP*CP*GP*CP*GP*CP*AP*GP*CP*CP*CP*TP
*A)-3')



4 Data and refinement statistics

Property	Value	Source
Space group	P 32 2 1	Depositor
Cell constants a, b, c, α , β , γ	91.90Å 91.90Å 261.53Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	16.00 – 3.60 16.00 – 3.61	Depositor EDS
% Data completeness (in resolution range)	(Not available) (16.00-3.60) 97.3 (16.00-3.61)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.88 (at 3.65Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.274 , 0.285 0.263 , 0.292	Depositor DCC
R_{free} test set	756 reflections (4.91%)	wwPDB-VP
Wilson B-factor (Å ²)	138.9	Xtriage
Anisotropy	0.333	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.25 , 105.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Estimated twinning fraction	0.045 for -h,-k,l	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	9084	wwPDB-VP
Average B, all atoms (Å ²)	111.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.11% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: EDO, 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	0.98	0/1226	1.22	12/1640 (0.7%)
1	B	0.97	0/1227	1.29	16/1640 (1.0%)
1	C	1.10	2/1227 (0.2%)	1.28	17/1640 (1.0%)
1	D	0.95	0/1227	1.25	15/1640 (0.9%)
1	E	1.02	3/1218 (0.2%)	1.25	11/1629 (0.7%)
1	F	0.96	1/1227 (0.1%)	1.24	10/1640 (0.6%)
1	G	0.97	2/1227 (0.2%)	1.31	16/1640 (1.0%)
2	H	1.56	1/249 (0.4%)	1.56	5/382 (1.3%)
2	J	1.13	0/221	1.43	2/338 (0.6%)
All	All	1.02	9/9049 (0.1%)	1.28	104/12189 (0.9%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	D	0	1
1	G	0	1
2	H	0	2
2	J	0	1
All	All	0	5

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	114	MET	SD-CE	6.54	1.96	1.79
1	E	114	MET	SD-CE	6.33	1.95	1.79
2	H	1	DC	N1-C2	6.22	1.52	1.40
1	G	117	ILE	CA-CB	6.17	1.61	1.54
1	C	121	MET	SD-CE	5.77	1.94	1.79

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	121	MET	SD-CE	5.60	1.93	1.79
1	E	46	MET	SD-CE	5.53	1.93	1.79
1	E	138	GLU	CG-CD	5.18	1.65	1.52
1	G	49	ILE	CA-CB	5.07	1.61	1.54

All (104) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	19	VAL	N-CA-C	-12.50	97.87	110.62
1	G	9	ILE	N-CA-C	-10.82	101.39	111.67
1	B	83	LEU	N-CA-C	9.15	123.85	110.59
1	D	144	ILE	N-CA-C	-9.04	103.04	111.45
2	H	11	DA	C4'-C3'-O3'	9.04	123.56	110.00
1	D	33	GLU	N-CA-C	-8.53	99.76	112.04
2	J	10	DC	C4'-C3'-O3'	8.38	122.57	110.00
1	B	32	THR	N-CA-C	-8.34	103.55	114.31
1	E	144	ILE	N-CA-C	-8.34	102.41	110.42
1	F	133	VAL	N-CA-C	-8.33	102.70	110.53
1	B	48	SER	N-CA-C	-8.21	103.42	113.19
1	B	106	TYR	N-CA-C	-8.02	102.13	111.03
1	B	72	VAL	N-CA-C	-7.89	104.18	113.42
1	C	124	ASP	N-CA-C	7.86	125.40	113.61
1	G	112	ALA	N-CA-C	-7.76	101.49	112.13
1	E	56	GLN	N-CA-C	-7.64	103.56	113.12
1	G	149	SER	N-CA-C	-7.61	104.14	113.50
1	E	85	LYS	CA-C-N	7.53	129.25	119.84
1	E	85	LYS	C-N-CA	7.53	129.25	119.84
1	B	148	THR	N-CA-C	-7.47	104.26	113.15
1	C	93	ARG	N-CA-C	-7.37	103.32	111.36
1	G	123	SER	N-CA-C	7.23	118.85	110.97
1	F	123	SER	N-CA-C	7.19	120.98	112.93
1	D	94	LEU	N-CA-C	-7.15	104.70	113.50
1	E	25	LYS	N-CA-C	-7.08	104.62	113.55
1	A	40	GLN	N-CA-C	-7.05	102.41	111.02
1	D	68	VAL	N-CA-C	-7.05	105.91	112.96
1	G	108	LYS	N-CA-C	-6.96	103.63	111.07
1	E	94	LEU	N-CA-C	-6.94	104.33	114.39
1	B	112	ALA	N-CA-C	-6.91	104.73	113.43
1	C	54	VAL	N-CA-C	6.88	119.65	111.05
1	C	79	GLU	N-CA-C	-6.86	96.18	110.80
1	F	33	GLU	N-CA-C	-6.85	104.40	112.89
1	D	4	ARG	N-CA-C	-6.79	103.96	111.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	18	ASP	N-CA-C	-6.75	105.01	113.18
1	C	69	SER	N-CA-C	-6.72	104.89	113.23
1	F	122	THR	N-CA-C	6.67	121.49	112.88
1	F	104	LYS	N-CA-C	-6.62	105.20	113.55
1	A	148	THR	N-CA-C	-6.62	102.31	110.65
1	F	89	ASN	N-CA-C	6.48	120.40	112.23
1	B	125	PHE	N-CA-C	6.46	120.57	110.17
1	A	130	ILE	N-CA-C	-6.39	104.92	110.74
1	B	147	TYR	N-CA-C	-6.38	106.46	114.56
1	C	71	ARG	N-CA-C	-6.34	103.64	112.45
1	F	146	SER	N-CA-C	-6.34	104.45	111.36
1	D	8	HIS	N-CA-C	6.16	118.53	111.02
1	A	52	LEU	N-CA-C	6.13	118.17	108.79
1	F	124	ASP	N-CA-C	-6.12	104.18	112.26
2	H	6	DC	N1-C1'-C2'	-6.06	104.41	113.50
1	B	49	ILE	N-CA-C	-6.02	105.85	111.45
2	H	10	DC	N1-C1'-C2'	-6.00	104.51	113.50
1	D	19	VAL	N-CA-C	-5.99	106.66	111.81
1	C	34	TYR	N-CA-C	-5.99	105.71	114.39
1	A	128	LYS	N-CA-C	5.94	117.84	111.36
1	G	13	GLU	N-CA-C	-5.94	104.50	110.97
2	H	5	DG	C2'-C3'-O3'	5.91	120.37	111.50
2	H	7	DG	C4'-C3'-O3'	5.91	118.87	110.00
1	A	126	ASP	N-CA-C	-5.89	100.89	110.20
1	D	27	LEU	N-CA-C	-5.88	106.11	113.28
1	A	85	LYS	CA-C-N	5.86	127.17	119.84
1	A	85	LYS	C-N-CA	5.86	127.17	119.84
1	B	33	GLU	N-CA-C	-5.86	104.48	111.69
1	C	70	ARG	N-CA-C	-5.85	106.11	113.18
1	E	46	MET	N-CA-C	-5.77	104.60	111.69
1	E	66	ALA	N-CA-C	5.74	117.34	111.14
1	A	34	TYR	N-CA-C	-5.72	104.86	113.89
1	A	28	LYS	N-CA-C	-5.68	106.43	113.19
1	C	138	GLU	N-CA-C	-5.62	103.98	111.24
1	D	121	MET	N-CA-C	-5.61	106.27	113.23
1	G	64	ASN	N-CA-C	5.61	122.75	110.80
1	B	119	SER	N-CA-C	-5.55	105.33	111.71
1	E	87	ASP	N-CA-C	5.50	117.83	110.35
1	F	114	MET	N-CA-C	-5.49	105.20	111.07
1	G	60	LYS	N-CA-C	5.49	118.02	111.71
1	B	130	ILE	N-CA-C	-5.48	105.33	113.39
1	G	12	LEU	N-CA-C	-5.46	105.49	111.82

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	32	THR	N-CA-C	-5.39	107.36	114.04
1	G	99	LEU	N-CA-C	5.38	117.24	110.24
1	D	2	VAL	N-CA-C	5.34	120.44	109.34
1	B	19	VAL	N-CA-C	-5.33	104.84	112.35
1	C	36	ILE	N-CA-C	5.28	114.97	108.53
1	C	50	GLU	N-CA-C	5.26	116.84	108.79
1	C	148	THR	N-CA-C	-5.26	106.92	113.55
1	C	24	ALA	N-CA-C	5.24	118.13	111.69
1	C	40	GLN	N-CA-C	-5.23	106.16	112.54
1	C	43	VAL	N-CA-C	-5.23	105.30	111.00
1	B	90	THR	N-CA-C	-5.21	104.67	112.54
1	G	84	GLU	N-CA-C	-5.20	99.73	110.80
1	D	97	ILE	N-CA-C	5.19	115.05	107.37
1	G	69	SER	N-CA-C	-5.15	104.74	111.02
1	D	96	ILE	N-CA-C	-5.14	102.87	109.30
1	F	139	ILE	N-CA-C	-5.12	104.90	110.23
1	D	12	LEU	N-CA-C	-5.12	104.77	111.02
1	C	97	ILE	N-CA-C	5.10	119.95	109.34
1	D	38	ALA	N-CA-C	-5.10	106.16	112.38
1	G	136	VAL	N-CA-C	5.10	115.38	110.74
1	G	103	GLY	N-CA-C	-5.09	101.11	113.18
2	J	3	DC	C2'-C3'-O3'	5.08	119.11	111.50
1	C	144	ILE	CB-CA-C	-5.07	105.28	111.92
1	G	113	ILE	CB-CA-C	-5.06	105.22	111.70
1	D	92	GLN	N-CA-C	5.06	119.41	112.68
1	E	140	ILE	N-CA-C	-5.05	106.23	111.58
1	A	50	GLU	N-CA-C	5.05	114.90	108.24
1	A	6	GLU	N-CA-C	5.01	116.43	110.97

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	D	70	ARG	Sidechain
1	G	147	TYR	Sidechain
2	H	1	DC	Sidechain
2	H	2	DG	Sidechain
2	J	2	DG	Sidechain

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	1216	0	1290	164	0
1	B	1217	0	1290	167	0
1	C	1217	0	1290	159	0
1	D	1217	0	1290	155	0
1	E	1208	0	1279	170	0
1	F	1217	0	1290	154	0
1	G	1217	0	1290	149	0
2	H	222	0	123	18	0
2	J	198	0	112	4	0
3	B	8	0	12	0	0
3	E	4	0	6	0	0
3	F	4	0	6	0	0
3	H	8	0	12	0	0
4	B	8	0	12	0	0
4	F	8	0	12	0	0
4	H	8	0	12	0	0
4	J	16	0	24	0	0
5	A	9	0	0	0	0
5	B	8	0	0	0	0
5	C	16	0	0	0	0
5	D	16	0	0	0	0
5	E	7	0	0	1	0
5	F	7	0	0	1	0
5	G	10	0	0	1	0
5	H	8	0	0	0	0
5	J	10	0	0	0	0
All	All	9084	0	9350	1014	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 55.

All (1014) 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:114:MET:HE2	1:D:114:MET:HA	1.21	1.18

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:117:ILE:HB	1:F:121:MET:HE1	1.29	1.15
1:C:79:GLU:HB3	1:C:102:LYS:HD3	1.30	1.14
1:D:72:VAL:HA	1:D:75:LEU:HD12	1.14	1.14
1:F:118:ALA:O	1:F:122:THR:HG22	1.52	1.10
1:B:14:LYS:HE3	1:D:142:TYR:OH	1.52	1.10
1:A:16:ILE:HG12	1:B:16:ILE:HD11	1.34	1.08
1:F:139:ILE:CD1	1:F:139:ILE:H	1.66	1.08
1:C:82:LYS:HE3	1:C:100:SER:HA	1.32	1.07
1:F:132:LYS:O	1:F:136:VAL:HG23	1.53	1.07
1:F:139:ILE:H	1:F:139:ILE:HD12	0.95	1.07
1:B:31:GLN:NE2	1:B:41:SER:HB2	1.70	1.04
1:F:139:ILE:HD12	1:F:139:ILE:N	1.71	1.04
1:B:19:VAL:O	1:B:23:THR:HG23	1.56	1.03
1:A:102:LYS:HA	1:A:105:LYS:HB2	1.39	1.03
1:A:11:PHE:HB2	1:B:134:ARG:HH21	1.24	1.02
1:F:136:VAL:O	1:F:140:ILE:HG12	1.59	1.02
1:A:140:ILE:O	1:A:144:ILE:HG13	1.62	1.00
1:C:139:ILE:HA	1:G:139:ILE:HD11	1.45	0.98
1:G:67:ALA:O	1:G:70:ARG:HG2	1.63	0.98
1:A:117:ILE:O	1:A:121:MET:HE3	1.66	0.95
1:A:110:ARG:HA	1:A:113:ILE:HD12	1.49	0.95
1:F:37:SER:HB3	1:F:40:GLN:HG3	1.50	0.94
1:A:60:LYS:HA	1:B:21:THR:OG1	1.66	0.94
1:B:41:SER:HA	1:B:44:LEU:HD12	1.52	0.92
1:A:17:ASN:O	1:A:21:THR:HG23	1.70	0.91
1:B:36:ILE:HD11	1:B:106:TYR:HE1	1.33	0.91
1:A:117:ILE:HD12	1:A:118:ALA:N	1.86	0.91
1:G:53:THR:HG23	1:G:56:GLN:HE21	1.34	0.91
1:A:11:PHE:HB2	1:B:134:ARG:NH2	1.86	0.91
1:D:17:ASN:HA	1:D:20:ASN:HB2	1.53	0.90
1:A:53:THR:OG1	1:A:56:GLN:HG2	1.72	0.89
1:A:134:ARG:HG2	1:A:134:ARG:HH11	1.35	0.89
1:B:138:GLU:OE2	1:B:138:GLU:HA	1.72	0.89
1:A:72:VAL:O	1:A:76:LEU:HG	1.73	0.88
1:C:8:HIS:HD2	1:D:134:ARG:HD3	1.38	0.88
1:F:53:THR:O	1:F:57:ILE:HG12	1.73	0.88
1:C:72:VAL:HA	1:C:75:LEU:HD12	1.54	0.88
1:G:50:GLU:O	1:G:52:LEU:HD12	1.74	0.87
1:B:1:MET:HE3	1:B:4:ARG:HD2	1.55	0.87
1:A:30:LEU:HD21	1:A:109:GLU:HB2	1.57	0.87
1:D:114:MET:HA	1:D:114:MET:CE	2.03	0.87

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:139:ILE:O	1:E:143:ARG:HG3	1.75	0.87
1:G:102:LYS:HA	1:G:105:LYS:HB3	1.56	0.86
1:E:55:GLY:HA3	1:G:151:LEU:HD13	1.58	0.86
1:F:80:LEU:O	1:F:100:SER:HB3	1.76	0.86
1:F:117:ILE:HB	1:F:121:MET:CE	2.06	0.85
1:A:11:PHE:CB	1:B:134:ARG:HH21	1.88	0.85
1:A:101:ASN:HB2	1:A:102:LYS:HE3	1.57	0.85
1:C:8:HIS:CD2	1:D:134:ARG:HD3	2.11	0.84
1:C:85:LYS:HB2	1:C:86:PRO:CD	2.07	0.84
1:G:140:ILE:O	1:G:144:ILE:HG12	1.76	0.84
2:H:3:DC:H2'	2:H:3:DC:O2	1.77	0.84
1:F:75:LEU:HD22	1:F:81:VAL:HB	1.61	0.83
1:E:40:GLN:HB3	1:E:75:LEU:HD21	1.59	0.83
1:E:92:GLN:HB3	1:E:95:LYS:HD2	1.59	0.82
1:C:79:GLU:HB3	1:C:102:LYS:CD	2.10	0.82
1:E:23:THR:O	1:E:27:LEU:HG	1.79	0.82
1:G:68:VAL:HA	1:G:71:ARG:HG3	1.61	0.82
1:A:144:ILE:HA	1:B:121:MET:HE1	1.61	0.81
1:G:26:LEU:HD23	1:G:27:LEU:HG	1.63	0.81
1:C:122:THR:HG21	1:D:5:ILE:HD11	1.61	0.81
1:B:128:LYS:H	1:B:128:LYS:HD2	1.46	0.81
1:A:52:LEU:O	1:A:97:ILE:HD12	1.81	0.81
1:A:141:ASP:HB2	1:B:15:PHE:HD1	1.44	0.81
1:D:133:VAL:O	1:D:137:LEU:HB2	1.80	0.81
1:D:83:LEU:HD22	1:D:95:LYS:HB3	1.61	0.81
1:A:114:MET:HE1	1:B:9:ILE:HD11	1.63	0.81
1:B:126:ASP:HB3	1:B:129:GLU:HB3	1.62	0.81
1:D:66:ALA:HA	1:D:69:SER:HB3	1.63	0.81
1:A:36:ILE:HD12	1:A:37:SER:O	1.82	0.80
1:F:54:VAL:HG22	1:F:97:ILE:HD11	1.63	0.80
1:A:114:MET:O	1:A:117:ILE:HD11	1.82	0.80
1:G:28:LYS:HA	1:G:31:GLN:HB2	1.62	0.80
1:E:14:LYS:NZ	1:E:14:LYS:HA	1.97	0.80
1:B:31:GLN:HE21	1:B:41:SER:HB2	1.46	0.80
1:B:37:SER:HB3	1:B:39:GLU:OE2	1.80	0.80
1:B:50:GLU:O	1:B:52:LEU:HD12	1.82	0.80
1:D:98:LYS:HD2	1:D:99:LEU:O	1.81	0.79
1:G:134:ARG:O	1:G:138:GLU:HB2	1.81	0.79
1:B:36:ILE:HD11	1:B:106:TYR:CE1	2.16	0.79
1:F:75:LEU:HD23	1:F:80:LEU:HB3	1.62	0.79
1:F:64:ASN:HD22	1:F:68:VAL:HB	1.47	0.79

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:31:GLN:NE2	1:A:38:ALA:HA	1.96	0.79
1:C:5:ILE:HD12	1:C:5:ILE:H	1.49	0.78
1:B:28:LYS:HE3	1:B:28:LYS:HA	1.65	0.78
1:B:95:LYS:H	1:B:95:LYS:HD2	1.47	0.78
1:C:17:ASN:HD21	1:D:42:HIS:CE1	2.02	0.78
1:B:120:ASP:O	1:B:122:THR:N	2.16	0.78
1:D:72:VAL:HA	1:D:75:LEU:CD1	2.07	0.78
1:D:26:LEU:C	1:D:26:LEU:HD12	2.09	0.77
1:B:22:LEU:HD23	1:B:23:THR:N	1.99	0.77
1:C:45:ASN:O	1:C:48:SER:HB3	1.84	0.77
1:F:11:PHE:HE2	1:F:15:PHE:HD1	1.29	0.77
1:C:11:PHE:CD2	1:D:134:ARG:HD2	2.20	0.77
1:C:134:ARG:NH1	1:D:8:HIS:ND1	2.33	0.77
1:E:58:THR:HG21	1:E:68:VAL:HG11	1.65	0.77
1:A:146:SER:O	1:A:149:SER:OG	2.01	0.77
1:G:22:LEU:HD23	1:G:22:LEU:C	2.09	0.76
1:B:126:ASP:HB2	1:B:129:GLU:OE1	1.84	0.76
1:D:2:VAL:HG23	1:D:3:ARG:HD2	1.67	0.76
1:D:99:LEU:HD23	1:D:100:SER:H	1.50	0.76
1:E:101:ASN:HA	1:E:104:LYS:HB2	1.66	0.76
1:A:124:ASP:OD2	1:A:124:ASP:N	2.14	0.76
1:G:53:THR:HG22	1:G:96:ILE:HG13	1.66	0.76
1:D:65:LYS:H	1:D:65:LYS:HD2	1.51	0.76
1:B:15:PHE:O	1:B:19:VAL:HG23	1.85	0.76
1:D:22:LEU:HD23	1:D:23:THR:N	2.00	0.75
1:C:139:ILE:CA	1:G:139:ILE:HD11	2.17	0.75
1:E:5:ILE:CD1	1:E:5:ILE:H	1.99	0.75
1:F:140:ILE:O	1:F:144:ILE:HD13	1.86	0.74
1:C:27:LEU:O	1:C:31:GLN:HB2	1.88	0.74
1:C:126:ASP:OD1	1:C:129:GLU:HG3	1.87	0.74
1:E:41:SER:O	1:E:45:ASN:ND2	2.21	0.73
1:E:117:ILE:HD12	1:E:118:ALA:N	2.02	0.73
1:B:22:LEU:HD23	1:B:23:THR:H	1.52	0.73
1:E:53:THR:OG1	1:E:56:GLN:HB2	1.88	0.73
1:G:53:THR:HG23	1:G:56:GLN:NE2	2.03	0.73
1:C:135:GLN:OE1	1:G:142:TYR:HB2	1.88	0.73
1:F:92:GLN:HA	1:F:95:LYS:HD2	1.70	0.73
1:B:74:LYS:NZ	2:H:5:DG:H22	1.85	0.73
1:B:139:ILE:HG12	1:E:139:ILE:HG12	1.71	0.73
1:A:114:MET:CE	1:B:9:ILE:HD11	2.19	0.73
1:E:44:LEU:HD21	1:E:75:LEU:HD22	1.69	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:16:ILE:O	1:D:19:VAL:HG12	1.89	0.73
1:D:66:ALA:HA	1:D:69:SER:CB	2.19	0.73
1:C:64:ASN:HB2	1:C:68:VAL:HB	1.70	0.72
1:E:127:SER:C	1:E:129:GLU:H	1.96	0.72
1:F:75:LEU:HB3	1:F:81:VAL:HG12	1.70	0.72
1:G:91:ASP:HB3	1:G:94:LEU:HB3	1.71	0.72
1:D:40:GLN:OE1	1:D:71:ARG:HG3	1.88	0.72
1:E:53:THR:H	1:E:56:GLN:NE2	1.87	0.72
1:D:66:ALA:O	1:D:70:ARG:HG2	1.89	0.72
1:E:130:ILE:N	1:E:130:ILE:HD13	2.05	0.72
1:C:85:LYS:HB2	1:C:86:PRO:HD3	1.71	0.72
1:E:53:THR:H	1:E:56:GLN:HE21	1.38	0.71
1:D:114:MET:HE2	1:D:114:MET:CA	2.11	0.71
1:E:14:LYS:HA	1:E:14:LYS:HZ1	1.54	0.71
1:E:16:ILE:HG22	1:E:17:ASN:N	2.05	0.71
1:A:80:LEU:CD2	1:A:102:LYS:HB2	2.21	0.71
1:A:147:TYR:HD2	1:A:147:TYR:O	1.72	0.71
1:C:69:SER:O	1:C:73:LYS:HG3	1.90	0.71
1:E:38:ALA:O	1:E:42:HIS:HB2	1.91	0.71
1:E:140:ILE:O	1:E:144:ILE:HG12	1.90	0.71
1:C:17:ASN:HD21	1:D:42:HIS:HE1	1.37	0.71
1:F:135:GLN:O	1:F:139:ILE:CD1	2.39	0.71
1:G:102:LYS:HA	1:G:105:LYS:CB	2.20	0.71
1:F:11:PHE:C	1:F:11:PHE:CD2	2.67	0.71
1:G:37:SER:C	1:G:39:GLU:H	1.99	0.71
1:B:106:TYR:C	1:B:106:TYR:CD2	2.69	0.70
1:E:5:ILE:HD13	1:E:5:ILE:N	2.07	0.70
1:F:11:PHE:HE2	1:F:15:PHE:CD1	2.09	0.70
1:B:106:TYR:CD2	1:B:107:ILE:HD12	2.26	0.70
1:F:145:GLN:HA	1:F:148:THR:HB	1.73	0.70
1:E:28:LYS:HA	1:E:31:GLN:HB2	1.72	0.70
1:B:138:GLU:O	1:B:141:ASP:HB3	1.91	0.70
1:C:136:VAL:HA	1:C:139:ILE:CD1	2.21	0.70
1:C:80:LEU:HA	1:C:100:SER:HB3	1.73	0.70
1:E:8:HIS:CE1	1:F:134:ARG:HG2	2.26	0.70
1:A:75:LEU:HB3	1:A:81:VAL:HG21	1.74	0.69
1:F:37:SER:HB3	1:F:40:GLN:CG	2.22	0.69
1:G:70:ARG:HG3	1:G:71:ARG:N	2.08	0.69
1:F:81:VAL:HG22	1:F:82:LYS:H	1.56	0.69
1:G:37:SER:OG	1:G:39:GLU:HG3	1.92	0.69
1:E:5:ILE:H	1:E:5:ILE:HD13	1.57	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:11:PHE:CB	1:B:134:ARG:NH2	2.53	0.69
1:A:42:HIS:O	1:A:46:MET:HE1	1.92	0.69
1:A:134:ARG:HG2	1:A:134:ARG:NH1	2.08	0.69
1:B:53:THR:HG23	1:B:56:GLN:OE1	1.91	0.69
1:F:83:LEU:HG	1:F:84:GLU:N	2.07	0.69
1:A:102:LYS:HA	1:A:105:LYS:CB	2.20	0.69
1:C:83:LEU:HD22	1:C:95:LYS:CG	2.23	0.68
1:E:120:ASP:O	1:E:123:SER:OG	2.11	0.68
1:G:122:THR:O	1:G:125:PHE:HB2	1.93	0.68
1:A:135:GLN:NE2	1:C:124:ASP:OD1	2.26	0.68
1:F:11:PHE:C	1:F:11:PHE:HD2	2.02	0.68
1:C:17:ASN:ND2	1:D:42:HIS:HE1	1.92	0.68
1:E:137:LEU:O	1:F:15:PHE:HE1	1.76	0.68
1:B:40:GLN:O	1:B:44:LEU:HG	1.93	0.68
1:E:55:GLY:H	1:G:151:LEU:HD22	1.58	0.68
1:D:31:GLN:OE1	1:D:38:ALA:HA	1.94	0.68
1:E:52:LEU:CD1	1:E:56:GLN:HB3	2.24	0.67
1:E:144:ILE:HG23	1:F:22:LEU:HD22	1.74	0.67
1:E:150:LYS:HD2	1:E:150:LYS:N	2.09	0.67
1:D:77:ASN:C	1:D:79:GLU:H	2.01	0.67
1:D:141:ASP:OD2	1:D:145:GLN:HG2	1.94	0.67
1:B:31:GLN:HE22	1:B:41:SER:HB2	1.58	0.67
1:D:85:LYS:HB3	1:D:86:PRO:HD2	1.76	0.67
1:E:34:TYR:CE2	1:E:106:TYR:HB2	2.29	0.67
1:C:9:ILE:HD11	1:D:118:ALA:HB3	1.77	0.67
1:B:15:PHE:C	1:B:15:PHE:CD2	2.73	0.66
1:C:136:VAL:HG11	1:D:133:VAL:HG21	1.76	0.66
1:C:133:VAL:HG21	1:D:136:VAL:HG11	1.77	0.66
1:D:23:THR:HG22	1:D:114:MET:SD	2.36	0.66
1:B:38:ALA:C	1:B:40:GLN:H	2.03	0.66
1:E:81:VAL:HG23	1:E:99:LEU:HA	1.77	0.66
1:E:117:ILE:HD12	1:E:117:ILE:C	2.21	0.66
1:F:64:ASN:HD22	1:F:68:VAL:CB	2.09	0.66
1:E:18:ASP:HB3	1:F:144:ILE:HG21	1.78	0.66
1:G:76:LEU:HD11	1:G:83:LEU:HD12	1.78	0.66
1:G:126:ASP:N	1:G:126:ASP:OD2	2.29	0.66
1:C:142:TYR:HB2	1:G:135:GLN:HE21	1.61	0.65
1:G:52:LEU:O	1:G:97:ILE:HD12	1.95	0.65
1:D:82:LYS:O	1:D:98:LYS:HG3	1.96	0.65
1:E:68:VAL:O	1:E:72:VAL:HG23	1.96	0.65
1:A:74:LYS:O	1:A:78:ALA:HB3	1.96	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:109:GLU:O	1:D:113:ILE:HG12	1.96	0.65
1:E:80:LEU:O	1:E:100:SER:OG	2.11	0.65
1:A:105:LYS:O	1:A:109:GLU:HG2	1.97	0.65
1:F:125:PHE:CB	1:F:130:ILE:HD11	2.27	0.65
1:B:16:ILE:HG23	1:B:17:ASN:N	2.11	0.65
1:D:23:THR:O	1:D:27:LEU:HG	1.97	0.65
1:D:65:LYS:H	1:D:65:LYS:CD	2.09	0.65
1:E:84:GLU:HB3	1:E:96:ILE:H	1.60	0.65
1:B:118:ALA:O	1:B:122:THR:HG23	1.97	0.65
1:A:92:GLN:HA	1:A:95:LYS:HB2	1.78	0.65
1:C:122:THR:O	1:C:124:ASP:N	2.29	0.65
1:G:113:ILE:H	1:G:113:ILE:HD12	1.62	0.65
1:F:91:ASP:OD2	1:F:93:ARG:HG2	1.96	0.65
1:D:83:LEU:HA	1:D:97:ILE:HA	1.79	0.64
1:A:16:ILE:CG1	1:B:16:ILE:HD11	2.20	0.64
1:A:73:LYS:HA	1:A:76:LEU:HD12	1.79	0.64
1:G:147:TYR:CD1	1:G:147:TYR:C	2.75	0.64
1:D:122:THR:HA	1:D:125:PHE:CE1	2.33	0.64
1:D:65:LYS:HG2	1:D:66:ALA:H	1.62	0.64
1:C:5:ILE:HD12	1:C:5:ILE:N	2.13	0.64
1:A:13:GLU:HG3	1:B:45:ASN:HD21	1.63	0.64
1:B:114:MET:C	1:B:116:HIS:H	2.05	0.64
1:B:126:ASP:OD2	1:B:128:LYS:HD3	1.98	0.64
1:F:11:PHE:CE2	1:F:15:PHE:HD1	2.14	0.64
1:A:141:ASP:HB2	1:B:15:PHE:CD1	2.29	0.64
1:D:83:LEU:HD22	1:D:95:LYS:CB	2.28	0.64
1:D:135:GLN:O	1:D:136:VAL:C	2.40	0.64
1:C:9:ILE:O	1:C:13:GLU:HB2	1.99	0.63
1:C:83:LEU:HD22	1:C:95:LYS:HG3	1.79	0.63
1:G:50:GLU:HG3	1:G:52:LEU:HD11	1.80	0.63
1:A:118:ALA:O	1:A:122:THR:HG23	1.98	0.63
1:E:58:THR:CG2	1:E:68:VAL:HG11	2.28	0.63
1:A:52:LEU:HD21	1:A:56:GLN:HB2	1.81	0.63
1:D:16:ILE:CG2	1:D:17:ASN:N	2.62	0.63
1:F:14:LYS:NZ	1:F:14:LYS:HB2	2.14	0.62
1:G:111:LYS:HA	1:G:114:MET:HB2	1.80	0.62
1:C:11:PHE:CE2	1:D:134:ARG:HD2	2.33	0.62
1:D:34:TYR:CE2	1:D:106:TYR:HB2	2.33	0.62
1:F:64:ASN:HB3	1:F:68:VAL:CG1	2.28	0.62
1:G:53:THR:H	1:G:56:GLN:HE21	1.45	0.62
1:A:30:LEU:HD21	1:A:109:GLU:CB	2.28	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:100:SER:OG	1:C:102:LYS:HD2	1.98	0.62
1:F:125:PHE:HB2	1:F:130:ILE:HD11	1.80	0.62
1:B:53:THR:OG1	1:B:56:GLN:HG3	1.99	0.62
1:B:128:LYS:HD2	1:B:128:LYS:N	2.15	0.62
1:E:139:ILE:O	1:E:139:ILE:HG22	1.99	0.62
1:F:40:GLN:HG2	1:F:71:ARG:HG2	1.81	0.62
1:D:131:GLU:O	1:D:132:LYS:C	2.42	0.62
1:A:16:ILE:O	1:A:20:ASN:N	2.23	0.62
1:C:6:GLU:O	1:C:10:SER:OG	2.18	0.62
1:C:132:LYS:NZ	1:D:129:GLU:OE1	2.23	0.62
1:G:76:LEU:HD11	1:G:83:LEU:CD1	2.29	0.62
1:F:43:VAL:HG13	1:F:44:LEU:N	2.15	0.62
1:E:9:ILE:HD11	1:F:118:ALA:HB2	1.82	0.61
1:E:135:GLN:O	1:E:138:GLU:HB2	2.00	0.61
1:F:91:ASP:CG	1:F:92:GLN:H	2.07	0.61
1:G:37:SER:HG	1:G:39:GLU:HG3	1.66	0.61
1:F:75:LEU:HD23	1:F:80:LEU:CB	2.30	0.61
1:C:11:PHE:HD2	1:D:134:ARG:HD2	1.64	0.61
1:D:91:ASP:O	1:D:95:LYS:HD2	2.01	0.61
1:F:64:ASN:HB3	1:F:68:VAL:HG11	1.82	0.61
1:A:138:GLU:HG2	1:D:142:TYR:CD1	2.35	0.61
1:B:69:SER:O	1:B:73:LYS:HB2	2.01	0.61
1:E:58:THR:HG23	1:E:68:VAL:HG21	1.83	0.61
2:H:3:DC:H2'	2:H:4:DA:H4'	1.82	0.61
1:C:82:LYS:CE	1:C:100:SER:HA	2.21	0.61
1:A:83:LEU:O	1:A:84:GLU:HB3	2.01	0.61
1:C:136:VAL:HA	1:C:139:ILE:HD12	1.83	0.61
1:F:93:ARG:C	1:F:95:LYS:H	2.09	0.61
1:G:68:VAL:HA	1:G:71:ARG:CG	2.31	0.61
1:G:133:VAL:HG12	1:G:134:ARG:N	2.16	0.61
1:C:47:LEU:O	1:C:99:LEU:HD11	2.02	0.60
1:D:88:SER:O	1:D:89:ASN:ND2	2.34	0.60
1:F:64:ASN:ND2	1:F:68:VAL:HB	2.13	0.60
1:C:107:ILE:O	1:C:111:LYS:HB2	2.01	0.60
1:E:92:GLN:HB3	1:E:95:LYS:CD	2.30	0.60
1:C:64:ASN:HB3	1:C:67:ALA:HB3	1.84	0.60
1:C:117:ILE:HD12	1:C:117:ILE:C	2.26	0.60
1:D:64:ASN:O	1:D:68:VAL:HG12	2.01	0.60
1:G:52:LEU:HD23	1:G:56:GLN:HB3	1.83	0.60
1:B:31:GLN:NE2	1:B:41:SER:CB	2.55	0.60
1:D:99:LEU:HD21	1:D:103:GLY:HA3	1.84	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:100:SER:OG	1:C:102:LYS:CD	2.49	0.60
1:F:113:ILE:O	1:F:117:ILE:HG23	2.02	0.60
1:A:117:ILE:C	1:A:121:MET:HE3	2.26	0.60
1:F:10:SER:HA	1:F:13:GLU:HB2	1.82	0.60
1:E:92:GLN:CB	1:E:95:LYS:HD2	2.32	0.60
1:A:6:GLU:HG2	1:B:115:SER:OG	2.02	0.60
1:G:121:MET:C	1:G:123:SER:H	2.09	0.60
1:A:131:GLU:HG2	1:C:124:ASP:HB2	1.83	0.59
1:B:75:LEU:HD12	1:B:81:VAL:HB	1.83	0.59
1:F:9:ILE:HG22	1:F:10:SER:N	2.17	0.59
1:B:17:ASN:HA	1:B:20:ASN:HB2	1.84	0.59
1:B:95:LYS:HD2	1:B:95:LYS:N	2.16	0.59
1:E:133:VAL:HG12	1:E:137:LEU:CD1	2.33	0.59
1:B:46:MET:O	1:B:49:ILE:HG22	2.00	0.59
1:C:135:GLN:O	1:C:138:GLU:N	2.24	0.59
1:E:30:LEU:HD21	1:E:109:GLU:HB3	1.82	0.59
1:E:30:LEU:HD11	1:E:109:GLU:OE1	2.02	0.59
1:G:30:LEU:HD12	1:G:30:LEU:O	2.02	0.59
1:D:130:ILE:HD13	1:D:130:ILE:C	2.28	0.59
1:A:136:VAL:O	1:A:140:ILE:HD12	2.02	0.59
1:B:16:ILE:CG2	1:B:17:ASN:N	2.66	0.59
1:E:149:SER:HB2	1:E:150:LYS:HD2	1.83	0.59
1:F:47:LEU:C	1:F:99:LEU:HD11	2.27	0.59
1:D:140:ILE:O	1:D:144:ILE:HG13	2.02	0.59
1:F:19:VAL:O	1:F:23:THR:HG23	2.01	0.59
1:G:61:GLN:OE1	1:G:61:GLN:N	2.34	0.59
1:C:102:LYS:HE3	1:C:102:LYS:H	1.68	0.59
1:G:50:GLU:HG3	1:G:52:LEU:CD1	2.33	0.59
1:G:142:TYR:CD2	1:G:146:SER:HB3	2.38	0.59
1:E:65:LYS:HD3	1:E:65:LYS:N	2.17	0.59
1:G:135:GLN:O	1:G:138:GLU:HB3	2.02	0.59
1:C:5:ILE:H	1:C:5:ILE:CD1	2.15	0.59
1:F:107:ILE:O	1:F:110:ARG:HB3	2.03	0.59
1:B:106:TYR:C	1:B:106:TYR:HD2	2.10	0.58
1:F:27:LEU:N	1:F:27:LEU:HD23	2.18	0.58
1:D:54:VAL:HA	1:D:57:ILE:HD12	1.85	0.58
1:G:80:LEU:HD12	1:G:102:LYS:HG3	1.84	0.58
1:C:12:LEU:O	1:C:16:ILE:CD1	2.51	0.58
1:B:36:ILE:HD12	1:B:44:LEU:HD11	1.86	0.58
1:C:68:VAL:HA	1:C:71:ARG:HB2	1.85	0.58
1:D:99:LEU:CD2	1:D:103:GLY:HA3	2.33	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:15:PHE:HA	1:E:18:ASP:OD2	2.03	0.58
1:B:71:ARG:NH2	2:H:4:DA:N1	2.49	0.58
1:F:139:ILE:CD1	1:F:139:ILE:N	2.43	0.58
1:G:93:ARG:HB3	1:G:93:ARG:HH11	1.68	0.58
1:C:64:ASN:O	1:C:68:VAL:HG12	2.04	0.58
1:C:139:ILE:HG23	1:G:139:ILE:CG1	2.34	0.58
1:E:47:LEU:HD23	1:E:47:LEU:C	2.29	0.58
1:A:37:SER:N	1:A:40:GLN:OE1	2.37	0.58
1:A:93:ARG:NH2	2:H:11:DA:H62	2.01	0.58
1:C:98:LYS:HG2	1:C:99:LEU:H	1.68	0.58
1:F:107:ILE:HA	1:F:110:ARG:HB3	1.85	0.58
1:C:72:VAL:CA	1:C:75:LEU:HD12	2.32	0.58
1:E:133:VAL:HG12	1:E:137:LEU:HD12	1.84	0.58
1:F:127:SER:O	1:F:131:GLU:HG2	2.04	0.58
1:A:27:LEU:C	1:A:29:ASP:H	2.12	0.57
1:A:139:ILE:O	1:A:142:TYR:N	2.37	0.57
1:C:87:ASP:CG	1:C:88:SER:H	2.11	0.57
1:G:26:LEU:CD2	1:G:27:LEU:HG	2.34	0.57
1:A:121:MET:O	1:B:143:ARG:NH1	2.34	0.57
1:A:126:ASP:OD1	1:A:126:ASP:N	2.37	0.57
1:G:37:SER:O	1:G:39:GLU:N	2.37	0.57
1:A:134:ARG:HH21	1:B:11:PHE:HB2	1.70	0.57
1:B:71:ARG:NH2	2:H:4:DA:C6	2.71	0.57
1:E:83:LEU:HG	1:E:95:LYS:HE3	1.84	0.57
1:F:50:GLU:O	1:F:52:LEU:HG	2.04	0.57
1:F:136:VAL:O	1:F:140:ILE:CG1	2.45	0.57
1:G:70:ARG:HG3	1:G:71:ARG:H	1.68	0.57
1:C:9:ILE:CD1	1:D:115:SER:HA	2.35	0.57
1:D:77:ASN:O	1:D:79:GLU:N	2.37	0.57
1:G:91:ASP:O	1:G:95:LYS:HG3	2.04	0.57
1:A:47:LEU:O	1:A:99:LEU:HD21	2.05	0.57
1:A:93:ARG:HH22	2:H:11:DA:H62	1.53	0.57
1:G:106:TYR:O	1:G:110:ARG:N	2.31	0.57
1:B:129:GLU:O	1:B:133:VAL:HG23	2.04	0.56
1:C:33:GLU:O	1:C:34:TYR:HD1	1.88	0.56
1:E:127:SER:C	1:E:129:GLU:N	2.63	0.56
1:F:83:LEU:HG	1:F:84:GLU:H	1.68	0.56
1:C:129:GLU:O	1:C:133:VAL:HG23	2.04	0.56
1:G:68:VAL:O	1:G:72:VAL:HG23	2.05	0.56
1:B:136:VAL:HG23	1:E:142:TYR:HE1	1.69	0.56
1:C:17:ASN:O	1:C:21:THR:OG1	2.19	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:13:GLU:OE1	1:F:45:ASN:ND2	2.38	0.56
1:B:1:MET:HE3	1:B:4:ARG:CD	2.31	0.56
1:D:77:ASN:C	1:D:79:GLU:N	2.64	0.56
1:G:33:GLU:O	1:G:33:GLU:HG2	2.03	0.56
2:H:10:DC:O2	2:H:10:DC:H2'	2.04	0.56
1:E:47:LEU:O	1:E:49:ILE:N	2.38	0.56
1:C:138:GLU:O	1:C:139:ILE:C	2.48	0.56
1:C:150:LYS:O	1:C:151:LEU:C	2.48	0.56
1:D:85:LYS:HB3	1:D:86:PRO:CD	2.35	0.56
1:E:82:LYS:HZ3	1:E:98:LYS:HE3	1.71	0.56
1:E:82:LYS:NZ	1:E:98:LYS:HE3	2.20	0.56
1:A:52:LEU:CD2	1:A:56:GLN:HB2	2.36	0.56
1:C:117:ILE:HD12	1:C:117:ILE:O	2.04	0.56
1:F:83:LEU:CG	1:F:84:GLU:N	2.68	0.56
1:G:7:ASP:C	1:G:9:ILE:H	2.12	0.56
1:A:24:ALA:C	1:A:26:LEU:H	2.13	0.56
1:C:16:ILE:HG13	1:D:16:ILE:HD11	1.88	0.55
1:C:65:LYS:NZ	2:J:8:DC:N3	2.54	0.55
1:E:111:LYS:HE3	1:F:13:GLU:OE2	2.06	0.55
1:D:135:GLN:HA	1:D:138:GLU:HB2	1.88	0.55
1:C:11:PHE:CD2	1:D:134:ARG:CD	2.89	0.55
1:C:11:PHE:HD2	1:D:134:ARG:CD	2.19	0.55
1:D:96:ILE:N	1:D:96:ILE:HD12	2.21	0.55
1:G:146:SER:O	1:G:150:LYS:HG3	2.06	0.55
1:C:85:LYS:CB	1:C:86:PRO:CD	2.83	0.55
1:E:143:ARG:NH1	1:E:143:ARG:HG2	2.21	0.55
1:G:53:THR:N	1:G:56:GLN:HE21	2.03	0.55
1:B:74:LYS:HZ3	2:H:5:DG:H22	1.55	0.55
1:F:2:VAL:HG23	1:F:3:ARG:H	1.69	0.55
1:G:46:MET:O	1:G:49:ILE:HG13	2.06	0.55
1:A:128:LYS:HD2	1:A:129:GLU:HG2	1.87	0.55
1:C:128:LYS:HB2	1:C:128:LYS:NZ	2.22	0.55
1:D:47:LEU:HD21	1:D:97:ILE:HD11	1.88	0.55
1:F:37:SER:O	1:F:40:GLN:HB2	2.06	0.55
1:C:109:GLU:O	1:C:113:ILE:HG12	2.07	0.55
1:E:40:GLN:O	1:E:44:LEU:HG	2.07	0.55
1:E:52:LEU:HD12	1:E:56:GLN:HB3	1.89	0.55
1:C:138:GLU:HA	1:D:11:PHE:HZ	1.71	0.55
1:E:117:ILE:O	1:E:120:ASP:HB2	2.06	0.55
1:F:4:ARG:O	1:F:7:ASP:OD2	2.25	0.55
1:F:81:VAL:HG22	1:F:82:LYS:N	2.22	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:60:LYS:NZ	5:G:207:HOH:O	2.32	0.55
1:E:80:LEU:C	1:E:100:SER:OG	2.50	0.54
1:G:14:LYS:O	1:G:17:ASN:HB2	2.07	0.54
2:J:4:DG:N3	2:J:4:DG:H2'	2.20	0.54
1:A:40:GLN:O	1:A:41:SER:C	2.49	0.54
1:E:94:LEU:HD13	1:E:94:LEU:O	2.08	0.54
1:A:133:VAL:HG22	1:B:133:VAL:HG13	1.89	0.54
1:B:53:THR:HG23	1:B:56:GLN:CD	2.31	0.54
1:G:102:LYS:O	1:G:106:TYR:N	2.30	0.54
1:G:142:TYR:CD2	1:G:142:TYR:O	2.60	0.54
1:C:8:HIS:O	1:C:12:LEU:HB2	2.07	0.54
1:D:139:ILE:HG22	1:D:143:ARG:HH11	1.72	0.54
1:E:5:ILE:CD1	1:E:5:ILE:N	2.63	0.54
1:E:150:LYS:HD2	1:E:150:LYS:H	1.70	0.54
1:A:137:LEU:HB3	1:B:11:PHE:CE2	2.43	0.54
1:B:22:LEU:O	1:B:23:THR:C	2.50	0.54
1:C:15:PHE:CE2	1:D:137:LEU:HD11	2.43	0.54
1:B:135:GLN:O	1:B:136:VAL:C	2.51	0.54
1:B:139:ILE:C	1:B:141:ASP:N	2.63	0.54
1:F:114:MET:O	1:F:117:ILE:HG13	2.07	0.54
1:B:30:LEU:HD12	1:B:33:GLU:HB3	1.90	0.54
1:E:16:ILE:HG22	1:E:17:ASN:OD1	2.07	0.54
1:F:83:LEU:CG	1:F:84:GLU:H	2.21	0.54
1:A:27:LEU:C	1:A:29:ASP:N	2.64	0.54
1:G:34:TYR:CE2	1:G:106:TYR:HB2	2.43	0.54
1:D:62:GLY:O	1:D:64:ASN:N	2.41	0.54
1:G:142:TYR:CD2	1:G:142:TYR:C	2.86	0.54
1:A:4:ARG:NH2	1:F:7:ASP:HB2	2.23	0.53
1:C:12:LEU:O	1:C:16:ILE:HD12	2.08	0.53
1:G:139:ILE:HG22	1:G:140:ILE:N	2.22	0.53
1:A:58:THR:HG22	1:A:62:GLY:O	2.08	0.53
1:A:147:TYR:O	1:A:147:TYR:CD2	2.59	0.53
1:D:30:LEU:HD21	1:D:109:GLU:HB3	1.90	0.53
1:D:144:ILE:O	1:D:147:TYR:N	2.41	0.53
1:F:76:LEU:HD21	5:F:303:HOH:O	2.07	0.53
1:A:47:LEU:C	1:A:99:LEU:HD21	2.34	0.53
1:A:106:TYR:CE1	1:A:110:ARG:HB2	2.43	0.53
1:E:143:ARG:HH11	1:E:143:ARG:CG	2.21	0.53
1:A:25:LYS:HE3	1:B:59:GLU:OE2	2.08	0.53
1:D:142:TYR:O	1:D:145:GLN:HB2	2.09	0.53
1:B:75:LEU:CD1	1:B:80:LEU:HB2	2.38	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:13:GLU:OE2	1:F:110:ARG:NH1	2.36	0.53
1:E:14:LYS:O	1:E:17:ASN:N	2.41	0.53
1:E:126:ASP:O	1:E:129:GLU:HB3	2.09	0.53
1:B:105:LYS:O	1:B:109:GLU:HG3	2.08	0.53
1:F:10:SER:O	1:F:13:GLU:HB2	2.09	0.53
1:G:30:LEU:HD11	1:G:34:TYR:CE1	2.43	0.53
1:E:34:TYR:CZ	1:E:106:TYR:HB2	2.43	0.53
1:A:122:THR:O	1:A:122:THR:OG1	2.25	0.53
1:B:145:GLN:C	1:B:147:TYR:H	2.16	0.53
1:D:54:VAL:HG13	1:D:57:ILE:HD12	1.90	0.53
1:D:114:MET:CE	1:D:114:MET:CA	2.78	0.53
1:E:23:THR:O	1:E:27:LEU:CG	2.53	0.53
1:E:47:LEU:O	1:E:48:SER:C	2.51	0.53
1:G:75:LEU:N	1:G:75:LEU:HD23	2.24	0.53
1:B:75:LEU:HD12	1:B:81:VAL:CB	2.39	0.53
1:C:14:LYS:NZ	1:C:18:ASP:OD2	2.42	0.53
1:E:45:ASN:HA	1:E:107:ILE:HD11	1.91	0.53
1:G:64:ASN:C	1:G:65:LYS:HG2	2.33	0.53
1:A:139:ILE:O	1:A:141:ASP:N	2.43	0.52
1:C:145:GLN:NE2	1:D:18:ASP:OD2	2.39	0.52
1:E:9:ILE:HD11	1:F:118:ALA:CB	2.40	0.52
1:E:79:GLU:O	1:E:102:LYS:HB3	2.09	0.52
1:E:132:LYS:O	1:E:136:VAL:HG23	2.09	0.52
1:G:125:PHE:HB3	1:G:130:ILE:HD11	1.91	0.52
1:D:138:GLU:O	1:D:139:ILE:C	2.52	0.52
1:D:147:TYR:O	1:D:148:THR:C	2.52	0.52
1:G:100:SER:O	1:G:102:LYS:N	2.42	0.52
1:A:13:GLU:HG2	1:B:111:LYS:HZ1	1.74	0.52
1:B:38:ALA:C	1:B:40:GLN:N	2.67	0.52
1:D:135:GLN:O	1:D:138:GLU:N	2.43	0.52
1:A:14:LYS:HE2	1:A:18:ASP:OD2	2.10	0.52
1:B:16:ILE:CG2	1:B:17:ASN:H	2.23	0.52
1:B:49:ILE:O	1:B:50:GLU:HB2	2.09	0.52
1:C:76:LEU:O	1:C:76:LEU:HD22	2.10	0.52
1:C:134:ARG:HD2	1:D:11:PHE:CD2	2.45	0.52
1:F:9:ILE:CG2	1:F:10:SER:N	2.72	0.52
1:G:14:LYS:HG3	1:G:15:PHE:N	2.24	0.52
1:A:93:ARG:HH22	2:H:11:DA:N6	2.08	0.52
1:A:117:ILE:HD12	1:A:117:ILE:C	2.35	0.52
1:C:31:GLN:HG3	1:C:36:ILE:HD11	1.92	0.52
1:F:49:ILE:HG22	1:F:50:GLU:N	2.25	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:57:ILE:HG22	1:G:58:THR:N	2.25	0.52
1:D:114:MET:O	1:D:115:SER:C	2.53	0.51
1:F:44:LEU:HD23	1:F:47:LEU:HD12	1.90	0.51
1:A:53:THR:HG22	1:A:96:ILE:HA	1.92	0.51
1:C:103:GLY:O	1:C:106:TYR:HB3	2.10	0.51
1:E:20:ASN:O	1:E:21:THR:C	2.52	0.51
1:A:40:GLN:NE2	1:A:74:LYS:HE2	2.25	0.51
1:G:26:LEU:HD23	1:G:27:LEU:N	2.25	0.51
1:G:70:ARG:O	1:G:74:LYS:HG3	2.09	0.51
1:B:23:THR:HG22	1:B:114:MET:HE1	1.93	0.51
1:E:122:THR:C	1:E:124:ASP:H	2.17	0.51
1:E:144:ILE:CG2	1:F:22:LEU:HD22	2.40	0.51
1:C:146:SER:C	1:C:148:THR:H	2.19	0.51
1:F:3:ARG:HG3	1:F:6:GLU:HB2	1.91	0.51
1:G:117:ILE:HG13	1:G:121:MET:HE2	1.92	0.51
1:B:147:TYR:HD2	1:B:147:TYR:O	1.94	0.51
1:C:16:ILE:HG13	1:D:16:ILE:CD1	2.41	0.51
1:C:64:ASN:HB2	1:C:68:VAL:CB	2.39	0.51
1:C:80:LEU:H	1:C:102:LYS:HD3	1.76	0.51
1:D:117:ILE:O	1:D:120:ASP:N	2.40	0.51
1:A:92:GLN:HB2	2:H:7:DG:H22	1.75	0.51
1:B:1:MET:HG2	1:B:4:ARG:HE	1.76	0.51
1:B:30:LEU:HG	1:B:30:LEU:O	2.11	0.51
1:B:117:ILE:O	1:B:121:MET:HG3	2.11	0.51
1:E:40:GLN:HB3	1:E:75:LEU:CD2	2.37	0.51
1:G:18:ASP:O	1:G:19:VAL:C	2.54	0.51
1:A:39:GLU:HB2	1:A:71:ARG:HH21	1.76	0.51
1:E:28:LYS:HA	1:E:31:GLN:CB	2.41	0.51
1:A:65:LYS:HB2	2:H:7:DG:O6	2.11	0.51
1:B:15:PHE:O	1:B:15:PHE:CD2	2.64	0.51
1:C:46:MET:HE1	1:C:60:LYS:HB3	1.91	0.51
1:G:142:TYR:CE2	1:G:146:SER:HB3	2.46	0.51
1:E:53:THR:HG23	1:E:56:GLN:NE2	2.25	0.51
1:G:26:LEU:HD11	1:G:113:ILE:CG2	2.41	0.51
1:G:37:SER:C	1:G:39:GLU:N	2.66	0.51
1:G:142:TYR:O	1:G:142:TYR:HD2	1.94	0.51
1:A:114:MET:O	1:A:117:ILE:CD1	2.58	0.50
1:B:106:TYR:HD2	1:B:107:ILE:N	2.08	0.50
1:A:23:THR:HG22	1:A:114:MET:HG3	1.93	0.50
1:B:31:GLN:HE22	1:B:41:SER:CB	2.20	0.50
1:B:120:ASP:C	1:B:122:THR:H	2.19	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:84:GLU:HB3	1:E:96:ILE:N	2.23	0.50
1:F:135:GLN:O	1:F:138:GLU:HB2	2.12	0.50
1:G:7:ASP:C	1:G:9:ILE:N	2.67	0.50
1:G:101:ASN:HA	1:G:104:LYS:HG3	1.92	0.50
1:C:17:ASN:ND2	1:D:42:HIS:CE1	2.71	0.50
1:A:113:ILE:C	1:A:115:SER:H	2.19	0.50
1:B:135:GLN:O	1:B:138:GLU:HB2	2.12	0.50
1:C:70:ARG:HG3	1:C:73:LYS:HD2	1.93	0.50
1:C:144:ILE:HG23	1:D:22:LEU:HD13	1.93	0.50
1:G:53:THR:H	1:G:56:GLN:NE2	2.10	0.50
1:E:130:ILE:N	1:E:130:ILE:CD1	2.74	0.50
1:F:150:LYS:C	1:F:151:LEU:HG	2.37	0.50
1:D:26:LEU:HD21	1:D:117:ILE:HD12	1.94	0.50
1:B:76:LEU:HD11	1:B:83:LEU:HD11	1.94	0.50
1:E:137:LEU:O	1:F:15:PHE:CE1	2.61	0.50
1:G:102:LYS:CA	1:G:105:LYS:HB3	2.33	0.50
2:H:3:DC:C2'	2:H:4:DA:H4'	2.40	0.50
1:D:22:LEU:HD23	1:D:22:LEU:C	2.36	0.50
1:D:117:ILE:O	1:D:118:ALA:C	2.54	0.50
1:A:13:GLU:O	1:A:14:LYS:C	2.55	0.50
1:F:31:GLN:O	1:F:36:ILE:HG13	2.11	0.50
1:F:40:GLN:O	1:F:43:VAL:HG12	2.12	0.50
1:G:130:ILE:HD12	1:G:130:ILE:N	2.26	0.50
1:C:70:ARG:HA	1:C:73:LYS:HD2	1.94	0.49
1:D:49:ILE:HG22	1:D:50:GLU:HG2	1.93	0.49
1:E:52:LEU:HD13	1:E:56:GLN:HB3	1.94	0.49
1:E:52:LEU:HD12	1:E:57:ILE:HG13	1.93	0.49
1:F:43:VAL:CG1	1:F:44:LEU:N	2.75	0.49
1:D:44:LEU:HD12	1:D:106:TYR:CE2	2.47	0.49
1:D:42:HIS:O	1:D:46:MET:HG3	2.11	0.49
1:D:122:THR:HA	1:D:125:PHE:CD1	2.48	0.49
1:F:106:TYR:O	1:F:110:ARG:N	2.44	0.49
1:G:76:LEU:HA	1:G:81:VAL:O	2.11	0.49
1:E:129:GLU:C	1:E:130:ILE:HD13	2.36	0.49
1:G:15:PHE:C	1:G:15:PHE:CD2	2.90	0.49
1:E:4:ARG:O	1:E:4:ARG:HD3	2.12	0.49
1:D:42:HIS:C	1:D:44:LEU:H	2.21	0.49
1:E:143:ARG:NH1	1:E:143:ARG:CG	2.74	0.49
1:F:17:ASN:HA	1:F:20:ASN:HB2	1.95	0.49
1:G:22:LEU:HD23	1:G:23:THR:N	2.28	0.49
1:G:142:TYR:C	1:G:142:TYR:HD2	2.21	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:118:ALA:O	1:E:122:THR:HG22	2.13	0.49
1:F:4:ARG:O	1:F:5:ILE:C	2.55	0.49
1:G:52:LEU:HB3	1:G:57:ILE:HD12	1.95	0.49
1:A:82:LYS:HG3	1:A:100:SER:HA	1.95	0.48
1:B:30:LEU:HD21	1:B:109:GLU:HB2	1.95	0.48
1:D:16:ILE:HG23	1:D:17:ASN:N	2.28	0.48
1:G:32:THR:O	1:G:35:GLY:N	2.39	0.48
1:G:148:THR:HA	1:G:151:LEU:OXT	2.13	0.48
1:A:41:SER:OG	1:A:106:TYR:OH	2.29	0.48
1:A:139:ILE:C	1:A:141:ASP:N	2.69	0.48
1:C:102:LYS:H	1:C:102:LYS:CE	2.26	0.48
1:D:129:GLU:O	1:D:133:VAL:HG23	2.13	0.48
1:G:70:ARG:CG	1:G:71:ARG:N	2.75	0.48
1:A:27:LEU:CD2	1:A:110:ARG:HG3	2.43	0.48
1:A:53:THR:HG1	1:A:56:GLN:HG2	1.78	0.48
1:B:75:LEU:HD13	1:B:80:LEU:HB2	1.94	0.48
1:C:134:ARG:HH11	1:D:8:HIS:CE1	2.30	0.48
1:D:53:THR:HG22	1:D:96:ILE:HG13	1.94	0.48
1:E:111:LYS:HE3	1:F:13:GLU:CD	2.39	0.48
1:F:99:LEU:N	1:F:99:LEU:HD12	2.28	0.48
1:A:106:TYR:CD1	1:A:106:TYR:C	2.89	0.48
1:C:114:MET:SD	1:D:9:ILE:HD11	2.54	0.48
1:C:133:VAL:HG21	1:D:136:VAL:HG21	1.95	0.48
1:D:131:GLU:O	1:D:134:ARG:HB3	2.13	0.48
1:E:69:SER:O	1:E:73:LYS:HG3	2.12	0.48
1:F:53:THR:C	1:F:55:GLY:N	2.68	0.48
1:D:26:LEU:C	1:D:26:LEU:CD1	2.82	0.48
1:G:37:SER:OG	1:G:39:GLU:CG	2.62	0.48
1:A:40:GLN:NE2	1:A:74:LYS:HG2	2.27	0.48
1:B:15:PHE:O	1:B:19:VAL:CG2	2.60	0.48
1:C:111:LYS:O	1:C:112:ALA:C	2.56	0.48
1:D:137:LEU:O	1:D:138:GLU:C	2.57	0.48
1:E:134:ARG:NE	1:F:8:HIS:CE1	2.81	0.48
1:E:126:ASP:HB3	1:E:129:GLU:HB2	1.95	0.48
2:H:8:DC:H1'	2:H:9:DG:H21	1.79	0.48
1:E:70:ARG:O	1:E:73:LYS:HB2	2.14	0.48
1:A:31:GLN:HE21	1:A:38:ALA:HA	1.77	0.48
1:A:60:LYS:O	1:B:21:THR:HA	2.14	0.48
1:B:75:LEU:HD12	1:B:81:VAL:CG2	2.44	0.48
1:C:30:LEU:CD2	1:C:109:GLU:HB3	2.44	0.48
1:C:135:GLN:HE22	1:G:141:ASP:HB3	1.79	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:18:ASP:CB	1:F:144:ILE:HG21	2.43	0.48
1:E:129:GLU:HG3	1:F:132:LYS:HE3	1.95	0.48
1:A:16:ILE:O	1:A:17:ASN:C	2.56	0.48
1:A:36:ILE:HD12	1:A:36:ILE:C	2.39	0.48
1:B:75:LEU:CD1	1:B:81:VAL:HG23	2.43	0.48
1:C:11:PHE:CD1	1:C:11:PHE:C	2.91	0.48
1:C:15:PHE:CE1	1:C:19:VAL:CG2	2.97	0.48
1:D:99:LEU:HD23	1:D:100:SER:N	2.25	0.48
1:B:38:ALA:O	1:B:40:GLN:N	2.47	0.47
1:B:120:ASP:C	1:B:122:THR:N	2.71	0.47
1:F:45:ASN:OD1	1:F:110:ARG:NE	2.46	0.47
1:E:17:ASN:HD22	1:F:46:MET:HE3	1.78	0.47
1:F:83:LEU:CD1	1:F:84:GLU:H	2.26	0.47
1:C:52:LEU:O	1:C:57:ILE:HD11	2.14	0.47
1:C:116:HIS:C	1:C:116:HIS:ND1	2.72	0.47
1:E:139:ILE:O	1:E:139:ILE:CG2	2.60	0.47
1:F:144:ILE:HG22	1:F:145:GLN:N	2.29	0.47
1:G:97:ILE:HD12	1:G:97:ILE:H	1.78	0.47
1:G:107:ILE:HD13	1:G:107:ILE:HA	1.73	0.47
1:A:53:THR:HG22	1:A:96:ILE:HG23	1.97	0.47
1:A:55:GLY:O	1:A:59:GLU:HG2	2.14	0.47
1:B:75:LEU:HD12	1:B:81:VAL:HG23	1.97	0.47
1:D:134:ARG:O	1:D:138:GLU:N	2.43	0.47
1:F:117:ILE:HD13	1:F:121:MET:SD	2.54	0.47
1:A:8:HIS:CE1	1:B:134:ARG:HG3	2.49	0.47
1:F:91:ASP:CG	1:F:92:GLN:N	2.71	0.47
1:F:117:ILE:CD1	1:F:121:MET:SD	3.02	0.47
1:A:14:LYS:HZ3	1:B:141:ASP:CG	2.20	0.47
1:D:99:LEU:HD22	1:D:100:SER:O	2.15	0.47
1:F:92:GLN:O	1:F:95:LYS:HB2	2.14	0.47
1:A:93:ARG:NH2	2:H:11:DA:N6	2.62	0.47
1:A:146:SER:C	1:A:148:THR:N	2.72	0.47
1:C:14:LYS:O	1:C:17:ASN:HB2	2.14	0.47
1:C:22:LEU:HD22	1:D:144:ILE:HG23	1.96	0.47
1:D:115:SER:O	1:D:116:HIS:C	2.57	0.47
1:E:27:LEU:HD23	1:E:113:ILE:HG21	1.96	0.47
1:G:64:ASN:N	1:G:64:ASN:HD22	2.13	0.47
1:G:142:TYR:O	1:G:146:SER:HB3	2.15	0.47
1:C:122:THR:C	1:C:124:ASP:H	2.23	0.47
1:B:133:VAL:O	1:B:134:ARG:C	2.57	0.47
1:C:84:GLU:HG2	1:C:85:LYS:H	1.79	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:17:ASN:O	1:D:21:THR:N	2.28	0.47
1:G:88:SER:HB2	1:G:95:LYS:HE2	1.96	0.47
1:A:92:GLN:HB2	2:H:7:DG:N2	2.30	0.47
1:A:146:SER:C	1:A:148:THR:H	2.23	0.47
1:B:52:LEU:O	1:B:97:ILE:HD12	2.15	0.47
1:C:68:VAL:O	1:C:72:VAL:HG23	2.14	0.47
1:D:144:ILE:O	1:D:145:GLN:C	2.58	0.47
1:F:68:VAL:C	1:F:70:ARG:H	2.23	0.47
1:G:76:LEU:HD21	1:G:83:LEU:HD13	1.97	0.47
1:B:68:VAL:O	1:B:72:VAL:HG23	2.15	0.46
1:B:147:TYR:C	1:B:149:SER:H	2.22	0.46
1:C:5:ILE:O	1:C:8:HIS:N	2.48	0.46
1:F:10:SER:O	1:F:14:LYS:N	2.40	0.46
1:A:115:SER:O	1:A:119:SER:N	2.48	0.46
1:B:84:GLU:HB3	1:B:96:ILE:H	1.81	0.46
1:G:31:GLN:HG3	1:G:36:ILE:HG13	1.97	0.46
1:A:24:ALA:C	1:A:26:LEU:N	2.72	0.46
1:D:134:ARG:NH2	1:D:138:GLU:OE1	2.48	0.46
1:E:72:VAL:HA	1:E:75:LEU:HD12	1.97	0.46
1:G:37:SER:OG	1:G:40:GLN:HG3	2.16	0.46
1:G:44:LEU:HD13	1:G:106:TYR:CE2	2.51	0.46
1:B:1:MET:CG	1:B:4:ARG:HE	2.28	0.46
1:E:15:PHE:CA	1:E:18:ASP:OD2	2.64	0.46
1:E:143:ARG:O	1:E:147:TYR:HB2	2.16	0.46
1:G:22:LEU:C	1:G:22:LEU:CD2	2.81	0.46
1:G:37:SER:O	1:G:40:GLN:N	2.49	0.46
1:B:131:GLU:C	1:B:133:VAL:N	2.73	0.46
1:C:80:LEU:C	1:C:81:VAL:HG23	2.41	0.46
1:E:113:ILE:HG22	1:E:114:MET:N	2.30	0.46
1:F:37:SER:N	1:F:40:GLN:OE1	2.31	0.46
1:F:70:ARG:HA	1:F:73:LYS:HG3	1.97	0.46
1:F:93:ARG:C	1:F:95:LYS:N	2.72	0.46
1:G:136:VAL:C	1:G:138:GLU:N	2.74	0.46
1:C:135:GLN:O	1:C:136:VAL:C	2.56	0.46
1:D:26:LEU:CD2	1:D:117:ILE:HD12	2.46	0.46
1:E:142:TYR:C	1:E:142:TYR:CD2	2.94	0.46
1:A:56:GLN:HA	1:A:59:GLU:HG3	1.98	0.46
1:D:97:ILE:HG13	1:D:97:ILE:O	2.16	0.46
1:A:3:ARG:O	1:A:4:ARG:C	2.59	0.46
1:B:53:THR:HG22	1:B:96:ILE:HG23	1.97	0.46
1:B:82:LYS:HD3	1:B:100:SER:HB3	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:94:LEU:HB3	1:B:95:LYS:HD2	1.98	0.46
1:C:30:LEU:HD21	1:C:109:GLU:HB3	1.97	0.46
1:D:22:LEU:O	1:D:23:THR:C	2.59	0.46
1:E:150:LYS:N	1:E:150:LYS:CD	2.78	0.46
1:B:28:LYS:HE3	1:B:28:LYS:CA	2.43	0.46
1:B:50:GLU:CD	1:B:51:ALA:N	2.74	0.46
1:B:72:VAL:HA	1:B:75:LEU:HB2	1.97	0.46
1:B:126:ASP:CB	1:B:129:GLU:OE1	2.59	0.46
1:C:33:GLU:O	1:C:33:GLU:HG3	2.15	0.46
1:D:2:VAL:CG2	1:D:3:ARG:HD2	2.42	0.46
1:A:14:LYS:NZ	1:B:141:ASP:OD1	2.49	0.46
1:B:84:GLU:CB	1:B:96:ILE:H	2.28	0.46
1:B:136:VAL:CG2	1:E:142:TYR:HE1	2.29	0.46
1:C:117:ILE:C	1:C:117:ILE:CD1	2.88	0.46
1:D:43:VAL:O	1:D:47:LEU:HD12	2.16	0.46
1:E:46:MET:CG	1:E:47:LEU:N	2.75	0.46
1:G:64:ASN:C	1:G:65:LYS:CG	2.89	0.46
1:A:3:ARG:O	1:A:5:ILE:N	2.49	0.45
1:B:61:GLN:HB2	1:B:62:GLY:H	1.64	0.45
1:C:146:SER:OG	1:C:147:TYR:N	2.49	0.45
1:E:17:ASN:ND2	1:F:46:MET:HE3	2.31	0.45
1:C:12:LEU:HD23	1:C:16:ILE:HD11	1.98	0.45
1:C:115:SER:OG	1:D:9:ILE:HG21	2.16	0.45
1:C:139:ILE:HG23	1:G:139:ILE:HG12	1.98	0.45
1:E:143:ARG:HH11	1:E:143:ARG:HB3	1.81	0.45
1:D:31:GLN:NE2	1:D:41:SER:HB3	2.31	0.45
1:F:59:GLU:CG	1:F:60:LYS:HE2	2.47	0.45
1:G:70:ARG:CG	1:G:71:ARG:H	2.27	0.45
1:A:138:GLU:HG2	1:D:142:TYR:CE1	2.51	0.45
1:E:46:MET:SD	1:E:57:ILE:HG23	2.55	0.45
1:E:100:SER:C	1:E:102:LYS:H	2.24	0.45
1:G:16:ILE:CG2	1:G:17:ASN:N	2.79	0.45
1:A:102:LYS:CA	1:A:105:LYS:HB2	2.28	0.45
1:B:114:MET:C	1:B:116:HIS:N	2.73	0.45
1:B:131:GLU:N	1:B:131:GLU:OE1	2.50	0.45
1:C:16:ILE:HD12	1:C:16:ILE:H	1.81	0.45
1:C:43:VAL:HG12	1:C:44:LEU:N	2.31	0.45
1:E:12:LEU:HD12	1:E:12:LEU:HA	1.89	0.45
1:E:58:THR:HG22	1:E:64:ASN:OD1	2.16	0.45
1:A:135:GLN:C	1:A:137:LEU:N	2.71	0.45
1:B:128:LYS:H	1:B:128:LYS:CD	2.22	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:113:ILE:O	1:C:117:ILE:HG23	2.16	0.45
1:E:134:ARG:NH2	1:F:8:HIS:HA	2.31	0.45
1:G:42:HIS:CD2	1:G:42:HIS:N	2.83	0.45
1:E:18:ASP:HB3	1:F:144:ILE:CG2	2.46	0.45
1:E:141:ASP:OD2	1:E:141:ASP:C	2.60	0.45
1:F:106:TYR:O	1:F:109:GLU:N	2.49	0.45
1:G:71:ARG:O	1:G:74:LYS:HB2	2.17	0.45
1:G:119:SER:HA	1:G:122:THR:OG1	2.17	0.45
1:A:26:LEU:C	1:A:26:LEU:HD23	2.42	0.45
1:A:40:GLN:HE22	1:A:74:LYS:HE2	1.82	0.45
1:A:101:ASN:HD22	1:A:101:ASN:H	1.63	0.45
1:B:110:ARG:C	1:B:112:ALA:H	2.24	0.45
1:C:98:LYS:CG	1:C:99:LEU:H	2.30	0.45
1:E:9:ILE:HG22	1:E:10:SER:N	2.31	0.45
1:G:123:SER:C	1:G:125:PHE:H	2.25	0.45
1:G:147:TYR:CD1	1:G:148:THR:N	2.85	0.45
1:A:84:GLU:OE1	1:A:96:ILE:HD12	2.16	0.45
1:C:12:LEU:O	1:C:16:ILE:HD13	2.16	0.45
1:C:122:THR:C	1:C:124:ASP:N	2.73	0.45
1:C:139:ILE:H	1:C:139:ILE:HG13	1.52	0.45
1:C:142:TYR:CD2	1:C:142:TYR:C	2.94	0.45
1:D:5:ILE:O	1:D:8:HIS:N	2.50	0.45
1:D:40:GLN:C	1:D:42:HIS:H	2.23	0.45
1:E:80:LEU:HD23	1:E:103:GLY:HA2	1.98	0.45
1:F:28:LYS:O	1:F:28:LYS:HG3	2.16	0.45
1:F:83:LEU:HD12	1:F:84:GLU:H	1.81	0.45
1:B:37:SER:HB2	1:B:40:GLN:HG3	1.98	0.45
1:E:42:HIS:HA	1:E:45:ASN:OD1	2.17	0.45
1:E:67:ALA:O	1:E:71:ARG:HD2	2.17	0.45
1:F:4:ARG:HA	1:F:4:ARG:NE	2.31	0.45
1:G:101:ASN:O	1:G:104:LYS:HG3	2.17	0.45
1:G:140:ILE:O	1:G:141:ASP:C	2.58	0.45
1:A:9:ILE:O	1:A:13:GLU:N	2.46	0.44
1:C:22:LEU:O	1:C:23:THR:C	2.59	0.44
1:D:42:HIS:C	1:D:44:LEU:N	2.75	0.44
1:D:49:ILE:HD13	1:D:49:ILE:HA	1.86	0.44
1:E:17:ASN:HD22	1:F:46:MET:CE	2.29	0.44
1:F:59:GLU:HG2	1:F:60:LYS:HE2	1.98	0.44
1:A:9:ILE:H	1:A:9:ILE:HD12	1.82	0.44
1:B:2:VAL:O	1:B:6:GLU:OE2	2.35	0.44
1:C:83:LEU:HD22	1:C:95:LYS:HB3	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:40:GLN:HA	1:D:43:VAL:HG23	1.99	0.44
1:F:50:GLU:HG3	1:F:52:LEU:HD21	1.99	0.44
1:G:7:ASP:OD2	1:G:8:HIS:N	2.51	0.44
1:G:84:GLU:HG2	1:G:96:ILE:HG22	1.99	0.44
1:G:117:ILE:O	1:G:118:ALA:C	2.60	0.44
1:A:110:ARG:O	1:A:110:ARG:HG2	2.15	0.44
1:A:129:GLU:OE2	1:B:132:LYS:HE3	2.17	0.44
1:B:71:ARG:NH2	2:H:4:DA:C2	2.81	0.44
1:C:136:VAL:CG1	1:C:137:LEU:N	2.79	0.44
1:E:27:LEU:O	1:E:30:LEU:N	2.50	0.44
1:A:130:ILE:O	1:A:131:GLU:C	2.59	0.44
1:A:131:GLU:O	1:A:132:LYS:C	2.58	0.44
1:B:36:ILE:HB	1:B:37:SER:H	1.55	0.44
1:B:82:LYS:HD3	1:B:100:SER:CB	2.47	0.44
1:C:37:SER:HB2	1:C:40:GLN:NE2	2.32	0.44
1:D:44:LEU:HD12	1:D:106:TYR:HE2	1.83	0.44
1:E:3:ARG:HA	1:E:6:GLU:OE1	2.18	0.44
1:E:26:LEU:O	1:E:27:LEU:HD23	2.17	0.44
1:F:44:LEU:O	1:F:45:ASN:C	2.60	0.44
1:F:100:SER:OG	1:F:101:ASN:N	2.50	0.44
1:G:46:MET:HA	1:G:49:ILE:HD11	1.99	0.44
1:B:47:LEU:C	1:B:49:ILE:N	2.75	0.44
1:B:138:GLU:OE2	1:B:138:GLU:CA	2.49	0.44
1:E:5:ILE:O	1:E:7:ASP:N	2.51	0.44
1:E:71:ARG:NH2	5:E:1005:HOH:O	2.51	0.44
1:A:98:LYS:HG2	1:A:99:LEU:HD12	1.99	0.44
1:B:11:PHE:O	1:B:14:LYS:N	2.49	0.44
1:E:9:ILE:C	1:E:11:PHE:N	2.75	0.44
1:E:82:LYS:HB2	1:E:82:LYS:HE3	1.74	0.44
1:E:136:VAL:HG11	1:F:133:VAL:HG21	2.00	0.44
1:G:80:LEU:CD1	1:G:103:GLY:HA2	2.47	0.44
1:G:151:LEU:HD12	1:G:151:LEU:O	2.17	0.44
1:A:5:ILE:O	1:A:9:ILE:HD12	2.18	0.44
1:A:64:ASN:HA	1:A:67:ALA:HB3	2.00	0.44
1:B:71:ARG:HD2	1:B:71:ARG:HA	1.81	0.44
1:E:55:GLY:CA	1:G:151:LEU:HD13	2.38	0.44
1:A:52:LEU:HD21	1:A:57:ILE:N	2.33	0.44
1:E:9:ILE:O	1:E:12:LEU:N	2.51	0.44
1:C:102:LYS:HD2	1:C:102:LYS:N	2.32	0.44
1:D:37:SER:C	1:D:39:GLU:N	2.75	0.44
1:D:47:LEU:HD13	1:D:81:VAL:HG21	2.00	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:14:LYS:HA	1:E:14:LYS:CE	2.48	0.44
1:F:43:VAL:CG1	1:F:44:LEU:H	2.31	0.44
1:G:76:LEU:HG	1:G:82:LYS:HA	2.00	0.44
1:G:141:ASP:OD2	1:G:145:GLN:HG3	2.17	0.44
1:B:142:TYR:O	1:B:143:ARG:C	2.60	0.43
1:C:117:ILE:HG13	1:C:118:ALA:N	2.33	0.43
1:C:129:GLU:OE1	1:D:132:LYS:NZ	2.42	0.43
1:A:45:ASN:HB2	1:A:46:MET:HE3	2.00	0.43
1:A:137:LEU:HB3	1:B:11:PHE:HE2	1.81	0.43
1:E:20:ASN:HB3	1:E:21:THR:H	1.62	0.43
1:E:41:SER:O	1:E:45:ASN:CG	2.61	0.43
1:E:47:LEU:C	1:E:47:LEU:CD2	2.91	0.43
1:G:16:ILE:HG22	1:G:17:ASN:N	2.33	0.43
1:G:40:GLN:HA	1:G:43:VAL:HG23	2.00	0.43
1:C:94:LEU:O	1:C:95:LYS:C	2.61	0.43
1:D:5:ILE:O	1:D:6:GLU:C	2.61	0.43
1:E:144:ILE:HG23	1:E:144:ILE:HD12	1.55	0.43
1:E:144:ILE:HG23	1:F:22:LEU:CD2	2.45	0.43
1:F:23:THR:O	1:F:27:LEU:HG	2.19	0.43
1:G:37:SER:HG	1:G:40:GLN:HG3	1.83	0.43
1:B:127:SER:C	1:B:129:GLU:H	2.26	0.43
1:B:139:ILE:C	1:B:141:ASP:H	2.25	0.43
1:G:110:ARG:O	1:G:113:ILE:HD12	2.19	0.43
1:A:23:THR:O	1:A:27:LEU:HB2	2.19	0.43
1:A:53:THR:C	1:A:97:ILE:HD11	2.44	0.43
1:A:97:ILE:H	1:A:97:ILE:HG13	1.46	0.43
1:A:126:ASP:HB2	1:A:128:LYS:HG3	1.99	0.43
1:F:68:VAL:C	1:F:70:ARG:N	2.74	0.43
1:G:26:LEU:HD11	1:G:113:ILE:HG22	2.00	0.43
1:A:27:LEU:CD1	1:A:110:ARG:HG3	2.48	0.43
1:A:114:MET:SD	1:B:9:ILE:HD11	2.58	0.43
1:B:12:LEU:O	1:B:16:ILE:HB	2.19	0.43
1:D:111:LYS:O	1:D:115:SER:OG	2.30	0.43
1:F:16:ILE:HG22	1:F:20:ASN:OD1	2.19	0.43
1:F:94:LEU:O	1:F:94:LEU:HG	2.19	0.43
1:A:98:LYS:HG2	1:A:99:LEU:H	1.83	0.43
1:A:126:ASP:C	1:A:128:LYS:N	2.77	0.43
1:B:131:GLU:C	1:B:133:VAL:H	2.27	0.43
1:D:72:VAL:O	1:D:75:LEU:HB2	2.19	0.43
1:E:136:VAL:O	1:E:140:ILE:HG12	2.19	0.43
1:A:39:GLU:OE1	1:A:39:GLU:HA	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:5:ILE:O	1:C:7:ASP:N	2.52	0.43
1:E:14:LYS:C	1:E:18:ASP:OD2	2.62	0.43
1:G:147:TYR:CE1	1:G:151:LEU:OXT	2.72	0.43
1:A:53:THR:CG2	1:A:96:ILE:HG23	2.48	0.43
1:B:23:THR:HG22	1:B:114:MET:CE	2.48	0.43
1:B:78:ALA:HB3	1:B:80:LEU:HD12	2.00	0.43
1:C:32:THR:C	1:C:34:TYR:H	2.26	0.43
1:E:28:LYS:HE2	1:F:63:VAL:HG21	2.01	0.43
1:E:144:ILE:HG21	1:F:18:ASP:HB3	2.01	0.43
1:G:84:GLU:CD	1:G:85:LYS:N	2.77	0.43
1:G:106:TYR:O	1:G:106:TYR:CD1	2.71	0.43
1:A:44:LEU:HD21	1:A:75:LEU:HD13	1.99	0.43
1:B:22:LEU:CD2	1:B:23:THR:N	2.78	0.43
1:B:124:ASP:OD1	1:D:135:GLN:NE2	2.52	0.43
1:B:147:TYR:O	1:B:147:TYR:CD2	2.72	0.43
1:F:18:ASP:O	1:F:19:VAL:C	2.61	0.43
1:F:148:THR:C	1:F:150:LYS:H	2.26	0.43
1:A:5:ILE:O	1:A:9:ILE:CD1	2.67	0.42
1:A:64:ASN:O	1:A:68:VAL:HG12	2.19	0.42
1:A:114:MET:HE1	1:B:9:ILE:CD1	2.42	0.42
1:A:134:ARG:NH1	1:A:134:ARG:CG	2.78	0.42
1:C:26:LEU:HD21	1:C:113:ILE:HG22	2.00	0.42
1:E:124:ASP:OD2	1:F:143:ARG:NH2	2.52	0.42
1:F:147:TYR:C	1:F:147:TYR:CD2	2.97	0.42
1:A:115:SER:O	1:A:118:ALA:N	2.51	0.42
1:C:44:LEU:O	1:C:45:ASN:C	2.60	0.42
1:C:128:LYS:O	1:C:132:LYS:HB2	2.18	0.42
1:D:53:THR:CG2	1:D:96:ILE:HG13	2.48	0.42
1:D:82:LYS:HG3	1:D:100:SER:HB3	2.01	0.42
1:F:51:ALA:C	1:F:52:LEU:HD23	2.44	0.42
1:D:64:ASN:OD1	2:J:5:DC:N4	2.45	0.42
1:G:43:VAL:O	1:G:47:LEU:HG	2.20	0.42
1:E:8:HIS:HE1	1:F:134:ARG:HG2	1.81	0.42
1:E:58:THR:C	1:E:60:LYS:H	2.27	0.42
1:E:72:VAL:O	1:E:72:VAL:HG12	2.18	0.42
1:F:125:PHE:HB3	1:F:130:ILE:HD11	2.00	0.42
1:C:47:LEU:O	1:C:99:LEU:CD1	2.66	0.42
1:D:16:ILE:HG22	1:D:17:ASN:N	2.33	0.42
1:D:66:ALA:HA	1:D:69:SER:HB2	1.97	0.42
1:D:139:ILE:CG2	1:D:143:ARG:NH1	2.83	0.42
1:F:73:LYS:O	1:F:77:ASN:ND2	2.52	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:58:THR:O	1:G:59:GLU:C	2.61	0.42
1:A:46:MET:HE3	1:A:46:MET:N	2.35	0.42
1:A:85:LYS:O	1:A:87:ASP:N	2.53	0.42
1:B:110:ARG:HH11	1:B:111:LYS:HE2	1.84	0.42
1:C:131:GLU:C	1:C:133:VAL:H	2.27	0.42
1:D:96:ILE:N	1:D:96:ILE:CD1	2.82	0.42
1:D:144:ILE:C	1:D:146:SER:N	2.75	0.42
1:F:142:TYR:O	1:F:143:ARG:C	2.62	0.42
1:G:121:MET:C	1:G:123:SER:N	2.77	0.42
1:B:50:GLU:O	1:B:52:LEU:CD1	2.62	0.42
1:C:84:GLU:HG2	1:C:85:LYS:N	2.34	0.42
1:C:139:ILE:HG23	1:G:139:ILE:HG13	2.01	0.42
1:G:52:LEU:HD23	1:G:56:GLN:CB	2.47	0.42
1:G:80:LEU:CD1	1:G:102:LYS:HG3	2.48	0.42
1:G:80:LEU:HD11	1:G:103:GLY:HA2	2.02	0.42
1:F:99:LEU:HD12	1:F:99:LEU:H	1.85	0.42
1:G:103:GLY:C	1:G:105:LYS:N	2.77	0.42
1:A:40:GLN:HE21	1:A:74:LYS:HD3	1.83	0.42
1:B:6:GLU:O	1:B:9:ILE:HG22	2.19	0.42
1:B:45:ASN:O	1:B:48:SER:HB3	2.20	0.42
1:C:138:GLU:O	1:C:141:ASP:N	2.53	0.42
1:E:53:THR:HA	1:E:95:LYS:O	2.19	0.42
1:G:53:THR:HG22	1:G:96:ILE:CG1	2.43	0.42
1:A:36:ILE:CD1	1:A:37:SER:O	2.62	0.42
1:B:18:ASP:HA	1:B:21:THR:HG22	2.02	0.42
1:B:117:ILE:C	1:B:117:ILE:HD12	2.45	0.42
1:D:99:LEU:CD2	1:D:100:SER:H	2.26	0.42
1:E:131:GLU:HA	1:E:134:ARG:HB3	2.02	0.42
1:G:80:LEU:HD12	1:G:103:GLY:N	2.35	0.42
1:C:47:LEU:C	1:C:99:LEU:HD11	2.44	0.41
1:C:131:GLU:O	1:C:133:VAL:N	2.53	0.41
1:G:101:ASN:CA	1:G:104:LYS:HG3	2.50	0.41
1:A:72:VAL:HG12	1:A:76:LEU:HD11	2.01	0.41
1:B:11:PHE:O	1:B:15:PHE:N	2.50	0.41
1:E:5:ILE:O	1:E:8:HIS:N	2.53	0.41
1:E:122:THR:O	1:E:124:ASP:N	2.47	0.41
1:A:14:LYS:NZ	1:B:141:ASP:CG	2.79	0.41
1:C:6:GLU:H	1:C:6:GLU:HG2	1.45	0.41
1:C:146:SER:C	1:C:148:THR:N	2.78	0.41
1:D:88:SER:O	1:D:89:ASN:CG	2.63	0.41
1:D:5:ILE:HG22	1:D:6:GLU:N	2.35	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:83:LEU:HD23	1:D:97:ILE:HG22	2.01	0.41
1:E:82:LYS:HG3	1:E:100:SER:HB3	2.02	0.41
1:E:104:LYS:O	1:E:108:LYS:HG3	2.20	0.41
1:F:141:ASP:O	1:F:144:ILE:HB	2.20	0.41
2:H:3:DC:O2	2:H:3:DC:C2'	2.57	0.41
1:A:139:ILE:O	1:A:140:ILE:C	2.61	0.41
1:B:49:ILE:HD12	1:B:49:ILE:HA	1.78	0.41
1:C:41:SER:O	1:C:44:LEU:HB2	2.21	0.41
1:C:138:GLU:HA	1:D:11:PHE:CZ	2.52	0.41
1:F:53:THR:C	1:F:55:GLY:H	2.28	0.41
1:G:7:ASP:O	1:G:10:SER:N	2.54	0.41
1:A:110:ARG:HH11	1:A:110:ARG:HD2	1.74	0.41
1:A:140:ILE:O	1:A:140:ILE:CG2	2.69	0.41
1:B:9:ILE:O	1:B:9:ILE:HD13	2.20	0.41
1:B:16:ILE:O	1:B:19:VAL:HG23	2.21	0.41
1:E:111:LYS:HE3	1:F:13:GLU:OE1	2.20	0.41
1:F:43:VAL:O	1:F:47:LEU:HG	2.20	0.41
1:F:50:GLU:CG	1:F:52:LEU:HD21	2.50	0.41
1:F:69:SER:O	1:F:73:LYS:HE3	2.20	0.41
1:A:29:ASP:HB3	1:A:30:LEU:H	1.52	0.41
1:B:139:ILE:O	1:B:141:ASP:N	2.54	0.41
1:D:80:LEU:C	1:D:100:SER:OG	2.63	0.41
1:E:28:LYS:HE2	1:F:63:VAL:CG2	2.51	0.41
1:E:117:ILE:C	1:E:117:ILE:CD1	2.91	0.41
1:E:143:ARG:HH11	1:E:143:ARG:CB	2.34	0.41
1:F:93:ARG:O	1:F:95:LYS:N	2.54	0.41
1:F:137:LEU:O	1:F:140:ILE:HB	2.20	0.41
2:J:4:DG:N3	2:J:4:DG:C2'	2.84	0.41
1:B:120:ASP:O	1:B:121:MET:C	2.63	0.41
1:C:131:GLU:C	1:C:133:VAL:N	2.79	0.41
1:A:32:THR:C	1:A:35:GLY:H	2.29	0.41
1:A:120:ASP:O	1:A:121:MET:C	2.64	0.41
1:A:146:SER:O	1:A:148:THR:N	2.54	0.41
1:C:72:VAL:O	1:C:75:LEU:HB2	2.20	0.41
1:E:5:ILE:HD13	1:E:6:GLU:H	1.86	0.41
1:F:11:PHE:CD2	1:F:11:PHE:O	2.74	0.41
1:F:43:VAL:HG13	1:F:44:LEU:H	1.83	0.41
1:F:53:THR:HG22	1:F:95:LYS:C	2.46	0.41
1:F:106:TYR:O	1:F:107:ILE:C	2.63	0.41
1:G:18:ASP:C	1:G:20:ASN:N	2.74	0.41
1:A:36:ILE:HD12	1:A:37:SER:C	2.45	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:23:THR:O	1:C:27:LEU:HB2	2.21	0.40
1:D:5:ILE:HD13	1:D:5:ILE:HA	1.93	0.40
1:E:9:ILE:O	1:E:11:PHE:N	2.54	0.40
1:E:9:ILE:N	1:E:9:ILE:CD1	2.84	0.40
1:F:15:PHE:O	1:F:19:VAL:HG23	2.21	0.40
1:F:70:ARG:HA	1:F:73:LYS:CD	2.50	0.40
1:A:117:ILE:HB	1:A:121:MET:CE	2.51	0.40
1:C:70:ARG:HA	1:C:73:LYS:CD	2.50	0.40
1:D:16:ILE:HG22	1:D:17:ASN:H	1.85	0.40
1:D:27:LEU:O	1:D:28:LYS:C	2.64	0.40
1:E:9:ILE:O	1:E:10:SER:C	2.63	0.40
1:G:65:LYS:HB2	1:G:66:ALA:H	1.61	0.40
1:B:26:LEU:HD21	1:B:117:ILE:HG12	2.03	0.40
1:E:133:VAL:HG12	1:E:137:LEU:HD11	2.04	0.40
1:B:1:MET:SD	1:B:4:ARG:NE	2.89	0.40
1:B:7:ASP:O	1:B:10:SER:N	2.54	0.40
1:C:15:PHE:CE1	1:C:19:VAL:HG23	2.56	0.40
1:F:79:GLU:N	1:F:79:GLU:CD	2.79	0.40
1:A:16:ILE:O	1:A:19:VAL:N	2.54	0.40
1:B:47:LEU:C	1:B:49:ILE:H	2.28	0.40
1:C:9:ILE:HD12	1:D:115:SER:HA	2.03	0.40
1:C:17:ASN:ND2	1:D:46:MET:HE3	2.36	0.40
1:C:28:LYS:O	1:C:29:ASP:C	2.65	0.40
1:C:41:SER:O	1:C:44:LEU:N	2.54	0.40
1:C:113:ILE:HG12	1:C:113:ILE:H	1.68	0.40
1:D:54:VAL:HG22	1:D:57:ILE:HD12	2.04	0.40
1:E:46:MET:HE3	1:E:46:MET:HB2	1.88	0.40
1:E:128:LYS:HB3	1:E:128:LYS:HE3	1.85	0.40
1:G:13:GLU:O	1:G:16:ILE:HG22	2.20	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	149/151 (99%)	103 (69%)	38 (26%)	8 (5%)	1	14
1	B	149/151 (99%)	108 (72%)	32 (22%)	9 (6%)	1	13
1	C	149/151 (99%)	105 (70%)	32 (22%)	12 (8%)	1	8
1	D	149/151 (99%)	110 (74%)	24 (16%)	15 (10%)	0	5
1	E	148/151 (98%)	102 (69%)	32 (22%)	14 (10%)	0	6
1	F	149/151 (99%)	109 (73%)	33 (22%)	7 (5%)	2	17
1	G	149/151 (99%)	113 (76%)	29 (20%)	7 (5%)	2	17
All	All	1042/1057 (99%)	750 (72%)	220 (21%)	72 (7%)	1	11

All (72) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	29	ASP
1	A	63	VAL
1	B	121	MET
1	B	150	LYS
1	C	29	ASP
1	C	80	LEU
1	C	83	LEU
1	C	85	LYS
1	C	95	LYS
1	C	123	SER
1	D	78	ALA
1	D	123	SER
1	E	20	ASN
1	E	48	SER
1	E	84	GLU
1	E	86	PRO
1	F	2	VAL
1	F	65	LYS
1	G	38	ALA
1	G	80	LEU
1	G	101	ASN
1	B	36	ILE
1	B	39	GLU
1	B	129	GLU
1	C	132	LYS
1	D	63	VAL
1	D	86	PRO
1	E	6	GLU
1	E	60	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	E	123	SER
1	G	64	ASN
1	A	4	ARG
1	A	81	VAL
1	A	86	PRO
1	B	63	VAL
1	B	85	LYS
1	C	81	VAL
1	D	89	ASN
1	D	115	SER
1	E	21	THR
1	E	38	ALA
1	E	65	LYS
1	E	95	LYS
1	F	106	TYR
1	G	65	LYS
1	G	79	GLU
1	G	85	LYS
1	A	82	LYS
1	B	22	LEU
1	C	94	LEU
1	C	131	GLU
1	D	60	LYS
1	D	85	LYS
1	D	116	HIS
1	E	121	MET
1	F	28	LYS
1	F	85	LYS
1	F	93	ARG
1	F	94	LEU
1	A	90	THR
1	D	2	VAL
1	D	28	LYS
1	D	53	THR
1	E	10	SER
1	B	128	LYS
1	C	147	TYR
1	C	113	ILE
1	A	85	LYS
1	D	5	ILE
1	D	139	ILE
1	D	117	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	E	16	ILE

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	139/139 (100%)	105 (76%)	34 (24%)	1	4
1	B	139/139 (100%)	111 (80%)	28 (20%)	1	8
1	C	139/139 (100%)	105 (76%)	34 (24%)	1	4
1	D	139/139 (100%)	100 (72%)	39 (28%)	0	3
1	E	138/139 (99%)	99 (72%)	39 (28%)	0	3
1	F	139/139 (100%)	100 (72%)	39 (28%)	0	3
1	G	139/139 (100%)	91 (66%)	48 (34%)	0	1
All	All	972/973 (100%)	711 (73%)	261 (27%)	0	3

All (261) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	VAL
1	A	10	SER
1	A	13	GLU
1	A	22	LEU
1	A	28	LYS
1	A	32	THR
1	A	36	ILE
1	A	39	GLU
1	A	42	HIS
1	A	43	VAL
1	A	46	MET
1	A	52	LEU
1	A	57	ILE
1	A	61	GLN
1	A	71	ARG
1	A	81	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	83	LEU
1	A	85	LYS
1	A	87	ASP
1	A	88	SER
1	A	90	THR
1	A	97	ILE
1	A	99	LEU
1	A	102	LYS
1	A	108	LYS
1	A	121	MET
1	A	122	THR
1	A	123	SER
1	A	124	ASP
1	A	126	ASP
1	A	130	ILE
1	A	137	LEU
1	A	138	GLU
1	A	140	ILE
1	B	2	VAL
1	B	5	ILE
1	B	9	ILE
1	B	13	GLU
1	B	15	PHE
1	B	22	LEU
1	B	28	LYS
1	B	32	THR
1	B	36	ILE
1	B	39	GLU
1	B	49	ILE
1	B	72	VAL
1	B	75	LEU
1	B	76	LEU
1	B	80	LEU
1	B	92	GLN
1	B	93	ARG
1	B	97	ILE
1	B	106	TYR
1	B	117	ILE
1	B	122	THR
1	B	128	LYS
1	B	130	ILE
1	B	131	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	134	ARG
1	B	138	GLU
1	B	140	ILE
1	B	144	ILE
1	C	2	VAL
1	C	4	ARG
1	C	5	ILE
1	C	6	GLU
1	C	10	SER
1	C	12	LEU
1	C	13	GLU
1	C	21	THR
1	C	22	LEU
1	C	27	LEU
1	C	31	GLN
1	C	43	VAL
1	C	44	LEU
1	C	50	GLU
1	C	76	LEU
1	C	89	ASN
1	C	94	LEU
1	C	95	LYS
1	C	96	ILE
1	C	97	ILE
1	C	102	LYS
1	C	105	LYS
1	C	114	MET
1	C	115	SER
1	C	116	HIS
1	C	117	ILE
1	C	119	SER
1	C	128	LYS
1	C	138	GLU
1	C	139	ILE
1	C	140	ILE
1	C	143	ARG
1	C	148	THR
1	C	151	LEU
1	D	4	ARG
1	D	5	ILE
1	D	9	ILE
1	D	12	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	13	GLU
1	D	16	ILE
1	D	17	ASN
1	D	18	ASP
1	D	19	VAL
1	D	26	LEU
1	D	36	ILE
1	D	41	SER
1	D	42	HIS
1	D	43	VAL
1	D	49	ILE
1	D	52	LEU
1	D	53	THR
1	D	58	THR
1	D	63	VAL
1	D	65	LYS
1	D	79	GLU
1	D	81	VAL
1	D	83	LEU
1	D	97	ILE
1	D	99	LEU
1	D	101	ASN
1	D	107	ILE
1	D	114	MET
1	D	117	ILE
1	D	120	ASP
1	D	121	MET
1	D	128	LYS
1	D	129	GLU
1	D	130	ILE
1	D	131	GLU
1	D	137	LEU
1	D	138	GLU
1	D	140	ILE
1	D	143	ARG
1	E	4	ARG
1	E	5	ILE
1	E	7	ASP
1	E	9	ILE
1	E	14	LYS
1	E	26	LEU
1	E	31	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	E	37	SER
1	E	42	HIS
1	E	43	VAL
1	E	44	LEU
1	E	45	ASN
1	E	46	MET
1	E	52	LEU
1	E	58	THR
1	E	63	VAL
1	E	64	ASN
1	E	65	LYS
1	E	76	LEU
1	E	82	LYS
1	E	83	LEU
1	E	84	GLU
1	E	89	ASN
1	E	91	ASP
1	E	99	LEU
1	E	107	ILE
1	E	111	LYS
1	E	113	ILE
1	E	114	MET
1	E	119	SER
1	E	121	MET
1	E	122	THR
1	E	123	SER
1	E	130	ILE
1	E	132	LYS
1	E	143	ARG
1	E	146	SER
1	E	147	TYR
1	E	148	THR
1	F	1	MET
1	F	3	ARG
1	F	9	ILE
1	F	11	PHE
1	F	12	LEU
1	F	14	LYS
1	F	19	VAL
1	F	26	LEU
1	F	27	LEU
1	F	36	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	F	45	ASN
1	F	49	ILE
1	F	54	VAL
1	F	60	LYS
1	F	61	GLN
1	F	63	VAL
1	F	64	ASN
1	F	74	LYS
1	F	75	LEU
1	F	88	SER
1	F	93	ARG
1	F	96	ILE
1	F	97	ILE
1	F	99	LEU
1	F	105	LYS
1	F	109	GLU
1	F	113	ILE
1	F	115	SER
1	F	121	MET
1	F	129	GLU
1	F	132	LYS
1	F	133	VAL
1	F	134	ARG
1	F	136	VAL
1	F	138	GLU
1	F	139	ILE
1	F	144	ILE
1	F	149	SER
1	F	151	LEU
1	G	4	ARG
1	G	5	ILE
1	G	6	GLU
1	G	12	LEU
1	G	14	LYS
1	G	16	ILE
1	G	17	ASN
1	G	19	VAL
1	G	25	LYS
1	G	26	LEU
1	G	30	LEU
1	G	31	GLN
1	G	32	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	G	49	ILE
1	G	57	ILE
1	G	58	THR
1	G	63	VAL
1	G	64	ASN
1	G	65	LYS
1	G	68	VAL
1	G	69	SER
1	G	71	ARG
1	G	75	LEU
1	G	76	LEU
1	G	79	GLU
1	G	83	LEU
1	G	87	ASP
1	G	89	ASN
1	G	93	ARG
1	G	94	LEU
1	G	96	ILE
1	G	97	ILE
1	G	99	LEU
1	G	102	LYS
1	G	104	LYS
1	G	107	ILE
1	G	110	ARG
1	G	113	ILE
1	G	122	THR
1	G	125	PHE
1	G	126	ASP
1	G	127	SER
1	G	132	LYS
1	G	133	VAL
1	G	139	ILE
1	G	142	TYR
1	G	144	ILE
1	G	148	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (32) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	8	HIS
1	A	17	ASN
1	A	61	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	77	ASN
1	A	89	ASN
1	A	101	ASN
1	B	31	GLN
1	B	40	GLN
1	B	89	ASN
1	B	92	GLN
1	B	135	GLN
1	C	8	HIS
1	C	17	ASN
1	C	40	GLN
1	C	77	ASN
1	D	42	HIS
1	D	89	ASN
1	E	17	ASN
1	E	20	ASN
1	E	40	GLN
1	E	56	GLN
1	E	89	ASN
1	E	92	GLN
1	E	116	HIS
1	F	64	ASN
1	G	17	ASN
1	G	31	GLN
1	G	56	GLN
1	G	64	ASN
1	G	101	ASN
1	G	135	GLN
1	G	145	GLN

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 oligosaccharides in this entry.

5.6 Ligand geometry

11 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
3	EDO	F	201	-	3,3,3	0.44	0	2,2,2	0.13	0
3	EDO	B	2001	-	3,3,3	0.42	0	2,2,2	0.42	0
4	TRS	J	101	-	7,7,7	0.50	0	9,9,9	0.81	0
4	TRS	F	202	-	7,7,7	0.42	0	9,9,9	0.54	0
3	EDO	B	2002	-	3,3,3	0.45	0	2,2,2	0.21	0
4	TRS	H	103	-	7,7,7	0.55	0	9,9,9	0.77	0
3	EDO	E	201	-	3,3,3	0.43	0	2,2,2	0.17	0
4	TRS	B	2003	-	7,7,7	0.41	0	9,9,9	0.70	0
3	EDO	H	102	-	3,3,3	0.47	0	2,2,2	0.21	0
4	TRS	J	102	-	7,7,7	0.79	0	9,9,9	0.53	0
3	EDO	H	101	-	3,3,3	0.46	0	2,2,2	0.05	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	EDO	F	201	-	-	0/1/1/1	-
3	EDO	B	2001	-	-	0/1/1/1	-
4	TRS	J	101	-	-	0/9/9/9	-
4	TRS	F	202	-	-	0/9/9/9	-
3	EDO	B	2002	-	-	0/1/1/1	-
4	TRS	H	103	-	-	3/9/9/9	-
3	EDO	E	201	-	-	0/1/1/1	-
4	TRS	B	2003	-	-	0/9/9/9	-
3	EDO	H	102	-	-	0/1/1/1	-
4	TRS	J	102	-	-	0/9/9/9	-
3	EDO	H	101	-	-	0/1/1/1	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	H	103	TRS	N-C-C1-O1
4	H	103	TRS	C2-C-C1-O1
4	H	103	TRS	C3-C-C1-O1

There are no ring outliers.

No monomer is involved in short contacts.

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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	151/151 (100%)	-0.95	0 100 100	45, 112, 157, 165	0
1	B	151/151 (100%)	-1.04	0 100 100	61, 107, 160, 166	0
1	C	151/151 (100%)	-0.95	0 100 100	56, 109, 157, 171	0
1	D	151/151 (100%)	-0.99	0 100 100	51, 106, 157, 166	0
1	E	150/151 (99%)	-0.98	0 100 100	57, 109, 157, 166	0
1	F	151/151 (100%)	-1.05	0 100 100	57, 113, 157, 163	0
1	G	151/151 (100%)	-1.01	0 100 100	58, 109, 153, 166	0
2	H	11/17 (64%)	-0.29	0 100 100	130, 137, 143, 145	0
2	J	10/17 (58%)	-0.43	0 100 100	129, 138, 141, 142	0
All	All	1077/1091 (98%)	-0.98	0 100 100	45, 110, 158, 171	0

There are no RSRZ outliers to report.

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 oligosaccharides 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($\text{\AA}^2$)	Q<0.9
4	TRS	J	102	8/8	0.37	0.07	142,144,145,146	0
3	EDO	B	2001	4/4	0.54	0.08	116,118,119,120	0
4	TRS	J	101	8/8	0.55	0.10	136,137,138,138	0
3	EDO	H	101	4/4	0.63	0.08	103,107,108,109	0
3	EDO	F	201	4/4	0.76	0.06	109,110,111,112	0
3	EDO	B	2002	4/4	0.78	0.03	102,105,105,106	0
3	EDO	H	102	4/4	0.79	0.04	121,123,124,124	0
4	TRS	F	202	8/8	0.79	0.06	145,146,147,148	0
4	TRS	H	103	8/8	0.80	0.06	126,128,129,131	0
3	EDO	E	201	4/4	0.81	0.10	106,110,111,113	0
4	TRS	B	2003	8/8	0.85	0.04	142,144,145,146	0

6.5 Other polymers

There are no such residues in this entry.