



Full wwPDB NMR Structure Validation Report ⓘ

Jun 4, 2023 – 12:16 AM EDT

PDB ID : 2KRR
BMRB ID : 16646
Title : Solution structure of the RBD1,2 domains from human nucleolin
Authors : Arumugam, N.; Miller, C.; Maliekal, J.; Bates, P.J.; Trent, J.O.; Lane, A.N.
Deposited on : 2009-12-22

This is a Full wwPDB NMR 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/NMRValidationReportHelp>

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
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
BMRB Restraints Analysis : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.33

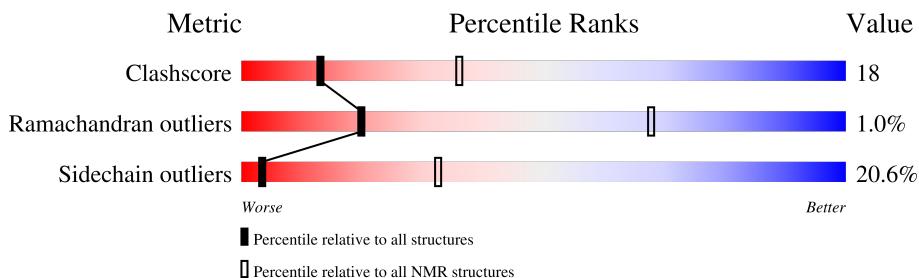
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR

The overall completeness of chemical shifts assignment is 85%.

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)	NMR archive (#Entries)
Clashscore	158937	12864
Ramachandran outliers	154571	11451
Sidechain outliers	154315	11428

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and 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 $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A	180	

2 Ensemble composition and analysis i

This entry contains 20 models. Model 7 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *lowest energy*.

The following residues are included in the computation of the global validation metrics.

Well-defined (core) protein residues			
Well-defined core	Residue range (total)	Backbone RMSD (Å)	Medoid model
1	A:8-A:82 (75)	0.26	7
2	A:86-A:93 (8)	0.35	6
3	A:95-A:124, A:129-A:164 (66)	0.31	4

Ill-defined regions of proteins are excluded from the global statistics.

Ligands and non-protein polymers are included in the analysis.

The models can be grouped into 4 clusters and 2 single-model clusters were found.

Cluster number	Models
1	1, 2, 3, 6, 7, 8, 13, 18, 19
2	4, 14, 15, 20
3	9, 11, 16
4	10, 12
Single-model clusters	5; 17

3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 2733 atoms, of which 1369 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Nucleolin.

Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	174	2733	864	1369	223	276	1	0

There are 11 discrepancies between the modelled and reference sequences:

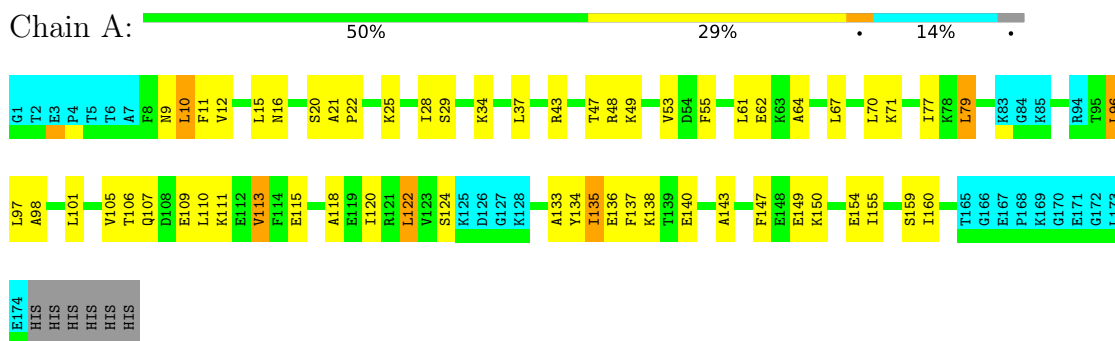
Chain	Residue	Modelled	Actual	Comment	Reference
A	168	PRO	-	expression tag	UNP P19338
A	171	GLU	-	expression tag	UNP P19338
A	172	GLY	-	expression tag	UNP P19338
A	173	LEU	-	expression tag	UNP P19338
A	174	GLU	-	expression tag	UNP P19338
A	175	HIS	-	expression tag	UNP P19338
A	176	HIS	-	expression tag	UNP P19338
A	177	HIS	-	expression tag	UNP P19338
A	178	HIS	-	expression tag	UNP P19338
A	179	HIS	-	expression tag	UNP P19338
A	180	HIS	-	expression tag	UNP P19338

4 Residue-property plots

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-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. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

- Molecule 1: Nucleolin

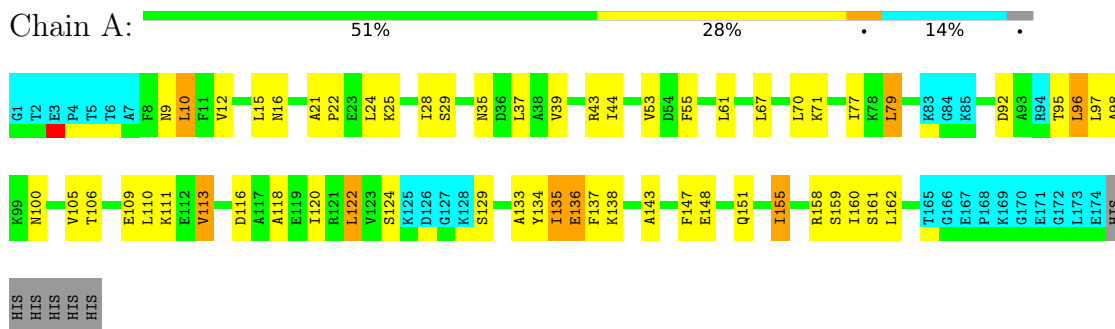


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

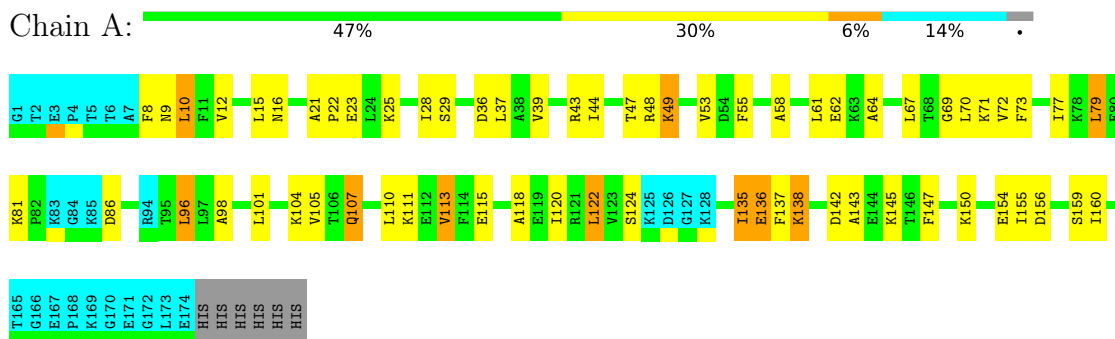
4.2.1 Score per residue for model 1

- Molecule 1: Nucleolin



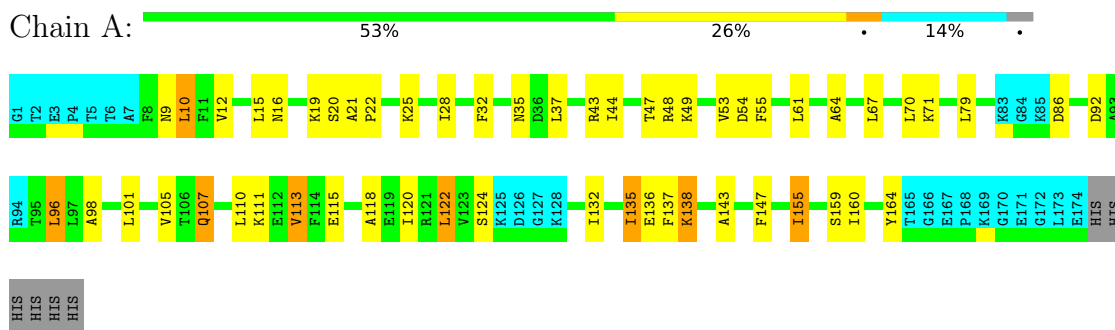
4.2.2 Score per residue for model 2

- Molecule 1: Nucleolin



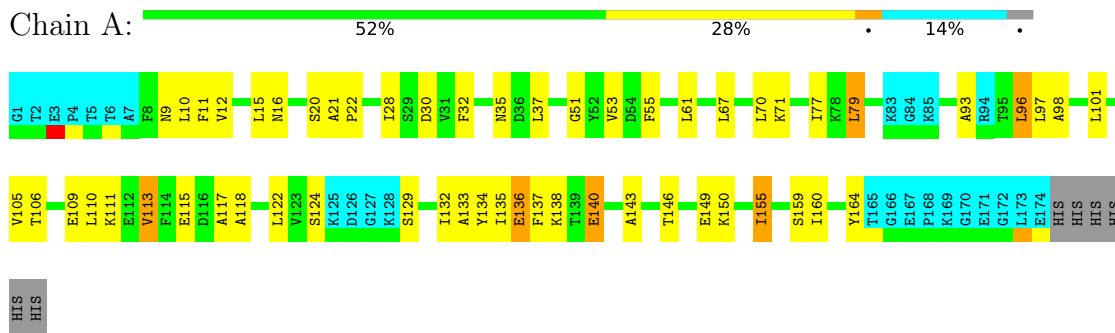
4.2.3 Score per residue for model 3

- Molecule 1: Nucleolin



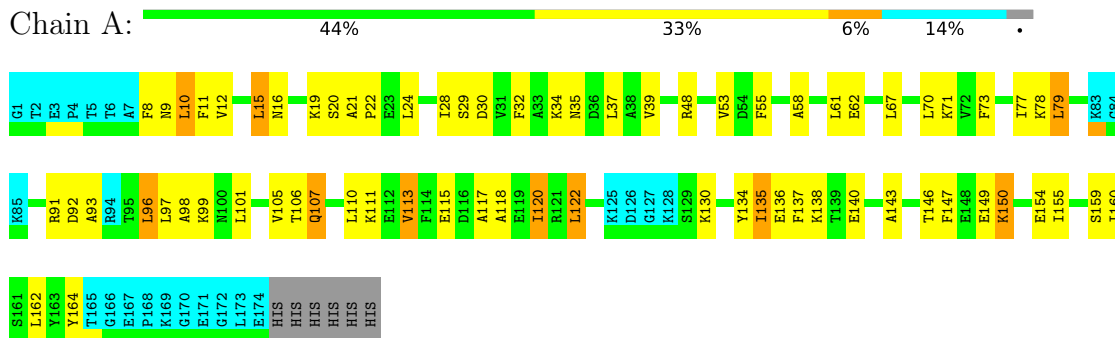
4.2.4 Score per residue for model 4

- Molecule 1: Nucleolin



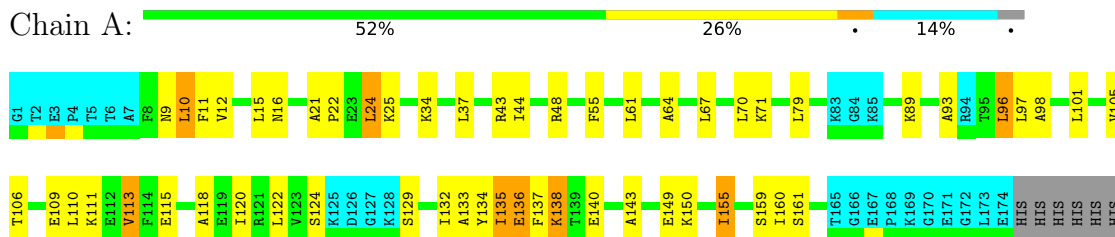
4.2.5 Score per residue for model 5

- Molecule 1: Nucleolin



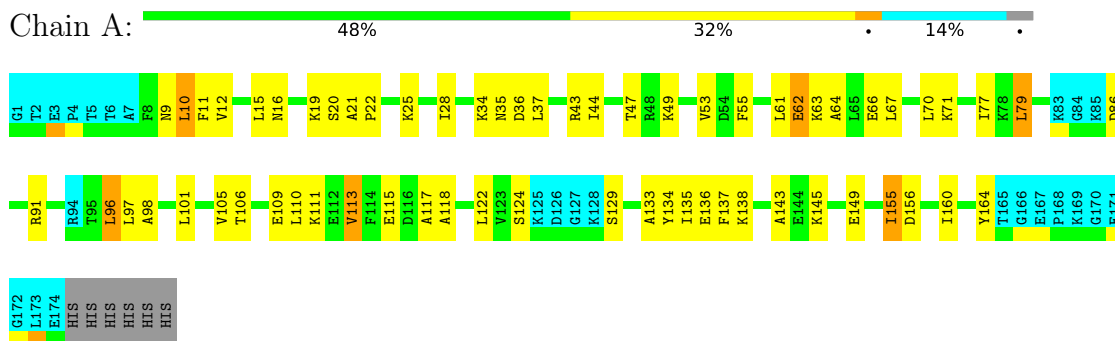
4.2.6 Score per residue for model 6

- Molecule 1: Nucleolin



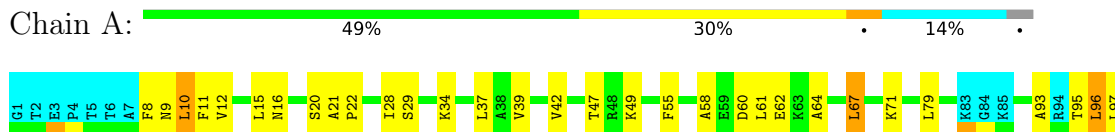
4.2.7 Score per residue for model 7 (medoid)

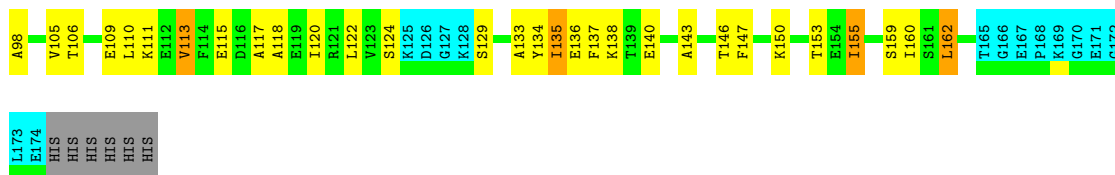
- Molecule 1: Nucleolin



4.2.8 Score per residue for model 8

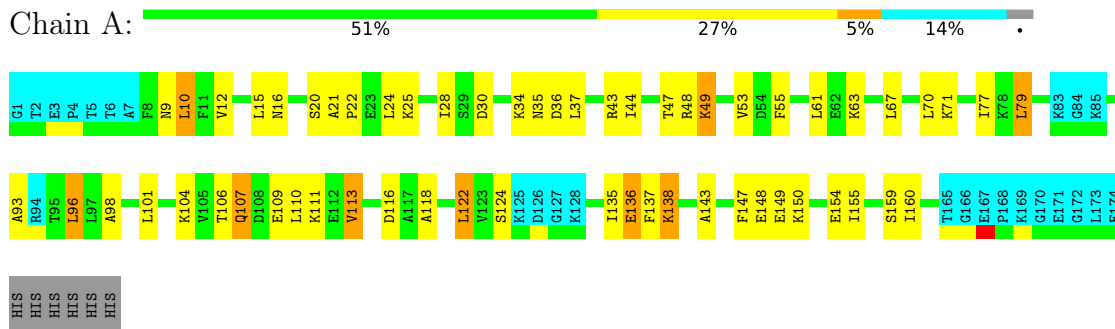
- Molecule 1: Nucleolin





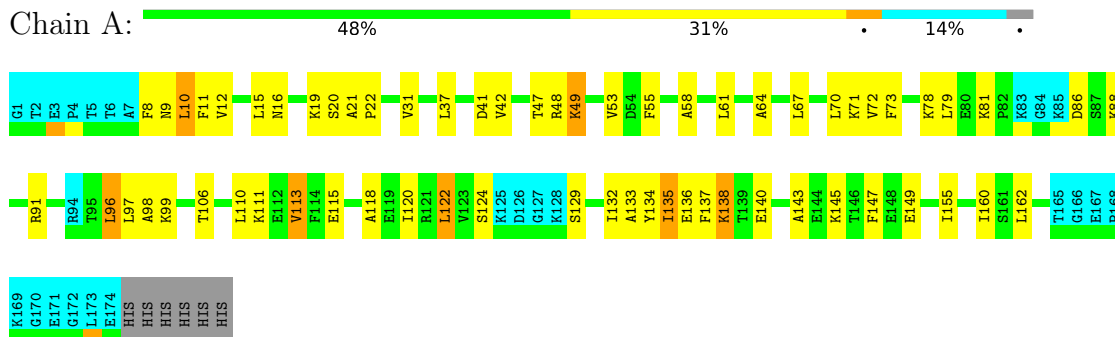
4.2.9 Score per residue for model 9

- Molecule 1: Nucleolin



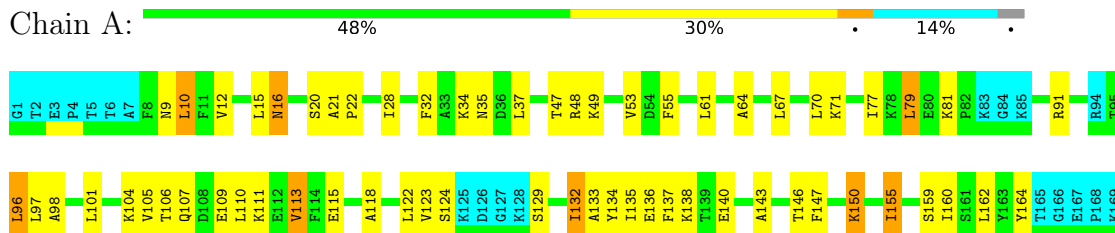
4.2.10 Score per residue for model 10

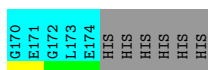
- Molecule 1: Nucleolin



4.2.11 Score per residue for model 11

- Molecule 1: Nucleolin

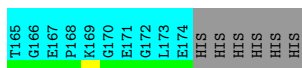
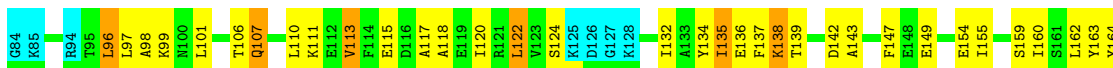




4.2.12 Score per residue for model 12

- Molecule 1: Nucleolin

Chain A: 46% 31% 6% 14%



4.2.13 Score per residue for model 13

- Molecule 1: Nucleolin

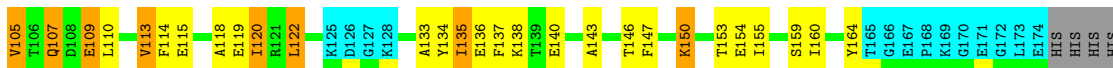
Chain A: 56% 23% 14%



4.2.14 Score per residue for model 14

- Molecule 1: Nucleolin

Chain A: 51% 26% 6% 14%



5 Refinement protocol and experimental data overview

The models were refined using the following method: *torsion angle dynamics*.

Of the 100 calculated structures, 20 were deposited, based on the following criterion: *structures with the lowest energy*.

The following table shows the software used for structure solution, optimisation and refinement.

Software name	Classification	Version
CYANA	refinement	2.1

The following table shows chemical shift validation statistics as aggregates over all chemical shift files. Detailed validation can be found in section 7 of this report.

Chemical shift file(s)	working_cs.cif
Number of chemical shift lists	1
Total number of shifts	1999
Number of shifts mapped to atoms	1999
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	85%

6 Model quality

6.1 Standard geometry

There are no covalent bond-length or bond-angle outliers.

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

6.2 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 each 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 averaged over the ensemble.

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	1185	1187	1187	44±6
All	All	23700	23740	23740	871

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 18.

All unique clashes are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:37:LEU:HD11	1:A:67:LEU:HD21	0.96	1.32	14	17
1:A:96:LEU:HD12	1:A:162:LEU:HD23	0.84	1.44	17	2
1:A:96:LEU:HD12	1:A:162:LEU:HD12	0.80	1.53	8	1
1:A:98:ALA:HB3	1:A:133:ALA:HB3	0.79	1.51	17	12
1:A:101:LEU:HD22	1:A:110:LEU:HD21	0.79	1.53	16	10
1:A:110:LEU:HD23	1:A:160:ILE:HD12	0.77	1.57	16	14
1:A:96:LEU:HD23	1:A:143:ALA:HB1	0.74	1.57	12	19
1:A:105:VAL:HG22	1:A:109:GLU:HG2	0.71	1.62	20	3
1:A:67:LEU:HD13	1:A:70:LEU:HD21	0.69	1.64	12	13
1:A:24:LEU:HD23	1:A:73:PHE:CE2	0.68	2.23	18	2
1:A:96:LEU:CD2	1:A:143:ALA:HB1	0.67	2.20	14	19
1:A:147:PHE:CE2	1:A:162:LEU:HD22	0.67	2.24	1	1
1:A:37:LEU:HD11	1:A:67:LEU:CD1	0.66	2.20	8	3
1:A:12:VAL:HG11	1:A:53:VAL:HG23	0.66	1.68	3	15

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:10:LEU:HD23	1:A:55:PHE:CE1	0.65	2.26	11	19
1:A:67:LEU:CD1	1:A:70:LEU:HD21	0.65	2.21	10	16
1:A:21:ALA:HB3	1:A:22:PRO:HD3	0.65	1.68	5	20
1:A:118:ALA:HB3	1:A:136:GLU:O	0.65	1.92	4	20
1:A:97:LEU:HD12	1:A:133:ALA:O	0.65	1.92	17	4
1:A:97:LEU:HD13	1:A:134:TYR:CE1	0.65	2.25	15	12
1:A:67:LEU:HD11	1:A:70:LEU:HD11	0.64	1.69	5	10
1:A:96:LEU:HD13	1:A:163:TYR:O	0.64	1.92	12	3
1:A:155:ILE:HD13	1:A:160:ILE:CD1	0.63	2.24	4	8
1:A:137:PHE:HB2	1:A:143:ALA:HB2	0.62	1.71	11	20
1:A:64:ALA:O	1:A:79:LEU:HD12	0.62	1.94	8	3
1:A:67:LEU:HD11	1:A:70:LEU:HD21	0.62	1.69	10	1
1:A:35:ASN:HB3	1:A:67:LEU:HD22	0.62	1.71	4	10
1:A:28:ILE:CD1	1:A:44:ILE:HD11	0.61	2.26	7	7
1:A:155:ILE:HD13	1:A:160:ILE:HD13	0.61	1.72	13	8
1:A:110:LEU:O	1:A:113:VAL:HG23	0.61	1.94	18	5
1:A:37:LEU:HD11	1:A:67:LEU:CD2	0.61	2.23	2	7
1:A:10:LEU:HD12	1:A:11:PHE:O	0.61	1.95	5	2
1:A:137:PHE:CB	1:A:143:ALA:HB2	0.61	2.26	1	16
1:A:37:LEU:HD11	1:A:67:LEU:HD11	0.60	1.72	8	3
1:A:110:LEU:HD23	1:A:160:ILE:CD1	0.60	2.27	6	8
1:A:93:ALA:HB3	1:A:140:GLU:HG3	0.60	1.74	4	1
1:A:96:LEU:HD12	1:A:162:LEU:CD2	0.59	2.25	17	1
1:A:21:ALA:HB3	1:A:22:PRO:CD	0.59	2.28	8	20
1:A:25:LYS:HG2	1:A:44:ILE:HD13	0.59	1.73	3	7
1:A:101:LEU:CD2	1:A:110:LEU:HD21	0.59	2.27	12	10
1:A:98:ALA:O	1:A:132:ILE:HG22	0.59	1.98	11	3
1:A:43:ARG:C	1:A:44:ILE:HD12	0.58	2.17	6	10
1:A:150:LYS:HG2	1:A:162:LEU:HD22	0.58	1.73	17	1
1:A:114:PHE:CE2	1:A:135:ILE:HG21	0.58	2.34	18	2
1:A:107:GLN:N	1:A:122:LEU:HD22	0.58	2.13	17	3
1:A:154:GLU:C	1:A:155:ILE:HD12	0.58	2.19	9	8
1:A:120:ILE:HA	1:A:135:ILE:HG22	0.57	1.75	18	3
1:A:77:ILE:CD1	1:A:79:LEU:HD13	0.57	2.30	16	13
1:A:120:ILE:HG23	1:A:135:ILE:CG2	0.56	2.29	19	11
1:A:25:LYS:CG	1:A:44:ILE:HD13	0.56	2.30	1	5
1:A:93:ALA:HB3	1:A:140:GLU:CB	0.56	2.31	6	2
1:A:8:PHE:CE1	1:A:58:ALA:HB2	0.56	2.36	2	5
1:A:10:LEU:HD11	1:A:12:VAL:HG12	0.56	1.77	8	5
1:A:61:LEU:C	1:A:61:LEU:HD13	0.56	2.21	8	4
1:A:97:LEU:C	1:A:97:LEU:HD13	0.55	2.22	16	4

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:10:LEU:HD12	1:A:11:PHE:N	0.55	2.16	10	5
1:A:101:LEU:HD13	1:A:110:LEU:HD11	0.55	1.78	5	8
1:A:93:ALA:HB3	1:A:140:GLU:HG2	0.55	1.79	5	4
1:A:107:GLN:NE2	1:A:133:ALA:HB1	0.55	2.17	14	1
1:A:114:PHE:C	1:A:114:PHE:CD1	0.55	2.79	18	2
1:A:64:ALA:HB1	1:A:79:LEU:CD1	0.54	2.33	10	6
1:A:69:GLY:C	1:A:70:LEU:HD23	0.54	2.23	18	2
1:A:97:LEU:HD23	1:A:134:TYR:CE1	0.53	2.39	16	4
1:A:10:LEU:HD12	1:A:10:LEU:C	0.53	2.24	6	4
1:A:96:LEU:HD12	1:A:162:LEU:CD1	0.53	2.31	8	1
1:A:43:ARG:O	1:A:44:ILE:HD12	0.53	2.04	3	5
1:A:114:PHE:CE2	1:A:135:ILE:HD13	0.53	2.38	14	1
1:A:61:LEU:HD23	1:A:62:GLU:N	0.53	2.19	5	6
1:A:37:LEU:HD22	1:A:60:ASP:HB3	0.53	1.79	8	1
1:A:77:ILE:HD13	1:A:79:LEU:HD13	0.53	1.80	17	9
1:A:72:VAL:HG12	1:A:73:PHE:CD2	0.53	2.37	10	4
1:A:97:LEU:HD22	1:A:98:ALA:N	0.53	2.19	10	4
1:A:10:LEU:HD11	1:A:79:LEU:HG	0.53	1.79	5	2
1:A:70:LEU:HD12	1:A:79:LEU:HD22	0.52	1.80	19	11
1:A:21:ALA:HB2	1:A:48:ARG:NH2	0.52	2.19	2	2
1:A:118:ALA:HB2	1:A:138:LYS:HG3	0.52	1.81	12	7
1:A:110:LEU:O	1:A:113:VAL:CG2	0.52	2.58	12	18
1:A:97:LEU:O	1:A:162:LEU:HD23	0.52	2.04	20	1
1:A:15:LEU:O	1:A:24:LEU:HD11	0.52	2.04	6	2
1:A:120:ILE:HG23	1:A:135:ILE:HG23	0.52	1.82	3	3
1:A:64:ALA:O	1:A:79:LEU:HD23	0.52	2.04	18	2
1:A:12:VAL:HG11	1:A:53:VAL:CG2	0.52	2.33	3	13
1:A:98:ALA:HB1	1:A:101:LEU:HD11	0.52	1.82	12	1
1:A:146:THR:HG23	1:A:150:LYS:HE3	0.51	1.81	15	2
1:A:154:GLU:O	1:A:155:ILE:HD12	0.51	2.05	2	6
1:A:67:LEU:HD12	1:A:70:LEU:HD11	0.51	1.81	16	1
1:A:10:LEU:HD23	1:A:55:PHE:HE1	0.51	1.63	5	13
1:A:12:VAL:HG23	1:A:15:LEU:HD21	0.51	1.83	14	17
1:A:114:PHE:CZ	1:A:135:ILE:HG21	0.51	2.40	19	2
1:A:97:LEU:HD13	1:A:134:TYR:CZ	0.51	2.40	1	2
1:A:107:GLN:N	1:A:122:LEU:HD13	0.50	2.21	3	9
1:A:29:SER:OG	1:A:39:VAL:HG21	0.50	2.07	8	2
1:A:137:PHE:CZ	1:A:146:THR:HG21	0.50	2.42	8	3
1:A:37:LEU:CD1	1:A:67:LEU:HD21	0.50	2.25	4	7
1:A:15:LEU:O	1:A:24:LEU:HD22	0.50	2.07	9	2
1:A:98:ALA:CB	1:A:101:LEU:HD11	0.50	2.37	12	3

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:107:GLN:HA	1:A:122:LEU:HD13	0.49	1.82	19	4
1:A:37:LEU:HD13	1:A:64:ALA:HB2	0.49	1.83	16	1
1:A:93:ALA:HB3	1:A:140:GLU:HB2	0.49	1.84	6	1
1:A:96:LEU:HD12	1:A:147:PHE:CD2	0.49	2.43	1	1
1:A:10:LEU:HB3	1:A:61:LEU:HD21	0.49	1.84	19	3
1:A:28:ILE:HD12	1:A:44:ILE:HD11	0.49	1.85	9	5
1:A:107:GLN:CD	1:A:120:ILE:HG22	0.49	2.28	14	1
1:A:64:ALA:HB1	1:A:79:LEU:HD21	0.48	1.85	11	2
1:A:8:PHE:CD1	1:A:58:ALA:HB2	0.48	2.44	2	3
1:A:42:VAL:HG12	1:A:53:VAL:HG13	0.48	1.85	10	1
1:A:10:LEU:HD12	1:A:11:PHE:C	0.48	2.29	10	5
1:A:110:LEU:HD13	1:A:133:ALA:CB	0.47	2.39	15	1
1:A:21:ALA:HB2	1:A:48:ARG:CZ	0.47	2.39	10	2
1:A:21:ALA:N	1:A:22:PRO:HD2	0.47	2.23	14	20
1:A:97:LEU:HD22	1:A:98:ALA:H	0.47	1.70	16	4
1:A:109:GLU:OE1	1:A:155:ILE:HG21	0.47	2.09	20	1
1:A:67:LEU:CD1	1:A:70:LEU:HD11	0.47	2.40	17	2
1:A:107:GLN:HG3	1:A:120:ILE:HG22	0.47	1.86	14	1
1:A:147:PHE:HA	1:A:162:LEU:HD13	0.47	1.87	1	1
1:A:93:ALA:HB3	1:A:140:GLU:HB3	0.47	1.87	8	4
1:A:29:SER:CB	1:A:39:VAL:HG21	0.46	2.40	19	9
1:A:35:ASN:CB	1:A:67:LEU:HD22	0.46	2.40	1	4
1:A:122:LEU:CD1	1:A:133:ALA:HB2	0.46	2.40	15	2
1:A:137:PHE:CG	1:A:143:ALA:HB2	0.46	2.46	5	4
1:A:110:LEU:HD13	1:A:122:LEU:HD21	0.46	1.86	1	2
1:A:29:SER:HB3	1:A:39:VAL:HG21	0.46	1.87	1	3
1:A:107:GLN:CA	1:A:122:LEU:HD13	0.46	2.41	19	6
1:A:97:LEU:O	1:A:162:LEU:HD12	0.46	2.10	5	1
1:A:64:ALA:HB1	1:A:79:LEU:CD2	0.46	2.41	11	2
1:A:139:THR:HG23	1:A:142:ASP:H	0.45	1.71	12	1
1:A:97:LEU:HD23	1:A:134:TYR:CD1	0.45	2.46	19	1
1:A:70:LEU:HD12	1:A:79:LEU:HD21	0.45	1.88	18	1
1:A:47:THR:HG23	1:A:49:LYS:H	0.45	1.71	3	9
1:A:105:VAL:HG22	1:A:109:GLU:CG	0.45	2.41	17	3
1:A:25:LYS:HG3	1:A:44:ILE:HD13	0.45	1.89	6	3
1:A:132:ILE:HD12	1:A:132:ILE:O	0.45	2.12	3	1
1:A:15:LEU:HD13	1:A:28:ILE:HD11	0.45	1.88	5	4
1:A:113:VAL:HG11	1:A:153:THR:HB	0.45	1.89	8	1
1:A:64:ALA:HB1	1:A:79:LEU:HD13	0.45	1.88	13	1
1:A:109:GLU:OE1	1:A:155:ILE:HG23	0.45	2.12	8	4
1:A:12:VAL:CG1	1:A:53:VAL:HG23	0.45	2.42	3	5

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:95:THR:HG23	1:A:135:ILE:O	0.44	2.12	1	3
1:A:10:LEU:C	1:A:10:LEU:HD12	0.44	2.32	13	1
1:A:96:LEU:HD11	1:A:147:PHE:HB2	0.44	1.89	12	2
1:A:110:LEU:CD1	1:A:122:LEU:HD13	0.44	2.43	20	1
1:A:96:LEU:HD13	1:A:164:TYR:CA	0.44	2.43	7	5
1:A:107:GLN:CG	1:A:120:ILE:HG22	0.44	2.43	14	1
1:A:12:VAL:HG12	1:A:79:LEU:HD12	0.44	1.90	18	1
1:A:21:ALA:CB	1:A:22:PRO:CD	0.44	2.95	5	14
1:A:96:LEU:HD13	1:A:164:TYR:HA	0.44	1.90	14	3
1:A:47:THR:CG2	1:A:50:PHE:CE2	0.44	3.01	15	1
1:A:146:THR:HG23	1:A:150:LYS:HE2	0.44	1.88	5	2
1:A:98:ALA:CB	1:A:133:ALA:HB3	0.44	2.35	17	1
1:A:69:GLY:O	1:A:70:LEU:HD23	0.44	2.13	18	1
1:A:10:LEU:HD11	1:A:79:LEU:HD22	0.44	1.90	6	4
1:A:9:ASN:N	1:A:61:LEU:HD22	0.44	2.28	16	1
1:A:32:PHE:CE2	1:A:53:VAL:HG11	0.43	2.48	5	1
1:A:61:LEU:C	1:A:61:LEU:HD23	0.43	2.34	4	6
1:A:123:VAL:HG13	1:A:123:VAL:O	0.43	2.14	11	1
1:A:93:ALA:HB3	1:A:140:GLU:CG	0.43	2.43	5	1
1:A:146:THR:HG23	1:A:150:LYS:CE	0.43	2.43	19	1
1:A:100:ASN:ND2	1:A:158:ARG:HE	0.43	2.11	1	1
1:A:29:SER:HB2	1:A:39:VAL:HG21	0.42	1.91	16	1
1:A:109:GLU:OE1	1:A:160:ILE:HD13	0.42	2.13	18	1
1:A:16:ASN:O	1:A:24:LEU:HD21	0.42	2.14	14	1
1:A:146:THR:HG23	1:A:150:LYS:CD	0.42	2.45	14	1
1:A:153:THR:CG2	1:A:160:ILE:HD11	0.42	2.44	14	1
1:A:147:PHE:CG	1:A:148:GLU:N	0.42	2.87	20	1
1:A:10:LEU:HD21	1:A:79:LEU:HD22	0.42	1.92	3	1
1:A:96:LEU:HD13	1:A:164:TYR:N	0.42	2.30	13	1
1:A:147:PHE:CD2	1:A:162:LEU:HD22	0.41	2.50	1	1
1:A:77:ILE:HD13	1:A:79:LEU:CD1	0.41	2.45	2	2
1:A:110:LEU:HB3	1:A:114:PHE:CZ	0.41	2.50	20	1
1:A:109:GLU:HG3	1:A:110:LEU:N	0.41	2.30	17	1
1:A:135:ILE:HD13	1:A:135:ILE:N	0.41	2.30	17	2
1:A:150:LYS:HE2	1:A:162:LEU:HD13	0.41	1.92	17	1
1:A:114:PHE:CD1	1:A:114:PHE:O	0.41	2.73	19	2
1:A:11:PHE:CD1	1:A:11:PHE:C	0.41	2.94	4	4
1:A:28:ILE:HG22	1:A:32:PHE:CE2	0.41	2.50	3	4
1:A:96:LEU:HD12	1:A:162:LEU:HG	0.41	1.93	10	1
1:A:12:VAL:HG22	1:A:51:GLY:C	0.41	2.36	4	1
1:A:31:VAL:HG21	1:A:70:LEU:HA	0.41	1.93	10	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:97:LEU:HD21	1:A:99:LYS:NZ	0.41	2.30	12	1
1:A:137:PHE:CE2	1:A:146:THR:HG21	0.41	2.51	14	1
1:A:96:LEU:HD21	1:A:143:ALA:HB1	0.41	1.92	19	1
1:A:29:SER:OG	1:A:42:VAL:HG21	0.41	2.15	8	2
1:A:96:LEU:HB3	1:A:147:PHE:CE2	0.40	2.51	1	1
1:A:110:LEU:CD1	1:A:122:LEU:HD21	0.40	2.45	1	1
1:A:134:TYR:C	1:A:135:ILE:HD13	0.40	2.36	12	1
1:A:8:PHE:C	1:A:61:LEU:HD12	0.40	2.36	18	1
1:A:161:SER:O	1:A:162:LEU:HD23	0.40	2.17	1	1
1:A:146:THR:HG23	1:A:150:LYS:NZ	0.40	2.31	11	1

6.3 Torsion angles [i](#)

6.3.1 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 PDB entries followed by that with respect to all NMR entries. 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	149/180 (83%)	138±2 (92±1%)	10±2 (7±2%)	2±1 (1±0%)	20	68
All	All	2980/3600 (83%)	2754 (92%)	195 (7%)	31 (1%)	20	68

All 3 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	16	ASN	20
1	A	117	ALA	8
1	A	67	LEU	3

6.3.2 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 PDB entries followed by that with respect to all NMR entries. 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	128/152 (84%)	102±3 (79±3%)	26±3 (21±3%)	3	32
All	All	2560/3040 (84%)	2032 (79%)	528 (21%)	3	32

All 73 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	9	ASN	20
1	A	71	LYS	20
1	A	96	LEU	20
1	A	113	VAL	20
1	A	135	ILE	20
1	A	138	LYS	20
1	A	10	LEU	18
1	A	115	GLU	18
1	A	122	LEU	17
1	A	111	LYS	16
1	A	124	SER	16
1	A	159	SER	15
1	A	79	LEU	14
1	A	105	VAL	14
1	A	106	THR	13
1	A	107	GLN	13
1	A	155	ILE	12
1	A	147	PHE	12
1	A	20	SER	12
1	A	150	LYS	11
1	A	149	GLU	11
1	A	34	LYS	11
1	A	136	GLU	9
1	A	19	LYS	9
1	A	129	SER	8
1	A	81	LYS	8
1	A	109	GLU	8
1	A	36	ASP	7
1	A	49	LYS	7
1	A	86	ASP	7
1	A	132	ILE	7
1	A	48	ARG	7
1	A	92	ASP	6
1	A	104	LYS	6
1	A	30	ASP	6
1	A	91	ARG	5

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Mol	Chain	Res	Type	Models (Total)
1	A	120	ILE	5
1	A	62	GLU	5
1	A	156	ASP	4
1	A	140	GLU	4
1	A	164	TYR	4
1	A	63	LYS	4
1	A	116	ASP	3
1	A	148	GLU	3
1	A	145	LYS	3
1	A	78	LYS	3
1	A	99	LYS	3
1	A	66	GLU	3
1	A	88	LYS	3
1	A	16	ASN	3
1	A	154	GLU	3
1	A	23	GLU	2
1	A	24	LEU	2
1	A	89	LYS	2
1	A	161	SER	2
1	A	162	LEU	2
1	A	25	LYS	2
1	A	47	THR	2
1	A	119	GLU	2
1	A	17	PHE	2
1	A	114	PHE	2
1	A	151	GLN	1
1	A	142	ASP	1
1	A	54	ASP	1
1	A	15	LEU	1
1	A	130	LYS	1
1	A	41	ASP	1
1	A	61	LEU	1
1	A	12	VAL	1
1	A	43	ARG	1
1	A	144	GLU	1
1	A	95	THR	1
1	A	146	THR	1

6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

6.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.6 Ligand geometry [i](#)

There are no ligands in this entry.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation [i](#)

The completeness of assignment taking into account all chemical shift lists is 85% for the well-defined parts and 85% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *assigned_chem_shift_list_1*

7.1.1 Bookkeeping [i](#)

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

Total number of shifts	1999
Number of shifts mapped to atoms	1999
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	0

7.1.2 Chemical shift referencing [i](#)

The following table shows the suggested chemical shift referencing corrections.

Nucleus	# values	Correction \pm precision, ppm	Suggested action
$^{13}\text{C}_\alpha$	174	-0.20 ± 0.14	None needed (< 0.5 ppm)
$^{13}\text{C}_\beta$	159	0.19 ± 0.12	None needed (< 0.5 ppm)
$^{13}\text{C}'$	174	-0.02 ± 0.11	None needed (< 0.5 ppm)
^{15}N	171	0.49 ± 0.28	None needed (< 0.5 ppm)

7.1.3 Completeness of resonance assignments [i](#)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 85%, i.e. 1746 atoms were assigned a chemical shift out of a possible 2044. 0 out of 25 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^1H	^{13}C	^{15}N
Backbone	746/748 (100%)	303/304 (100%)	298/298 (100%)	145/146 (99%)
Sidechain	913/1151 (79%)	602/741 (81%)	302/369 (82%)	9/41 (22%)

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	Total	¹ H	¹³ C	¹⁵ N
Aromatic	87/145 (60%)	57/70 (81%)	30/75 (40%)	0/0 (—%)
Overall	1746/2044 (85%)	962/1115 (86%)	630/742 (85%)	154/187 (82%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 85%, i.e. 1995 atoms were assigned a chemical shift out of a possible 2345. 0 out of 26 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	¹ H	¹³ C	¹⁵ N
Backbone	870/875 (99%)	355/358 (99%)	348/348 (100%)	167/169 (99%)
Sidechain	1038/1325 (78%)	682/850 (80%)	347/426 (81%)	9/49 (18%)
Aromatic	87/145 (60%)	57/70 (81%)	30/75 (40%)	0/0 (—%)
Overall	1995/2345 (85%)	1094/1278 (86%)	725/849 (85%)	176/218 (81%)

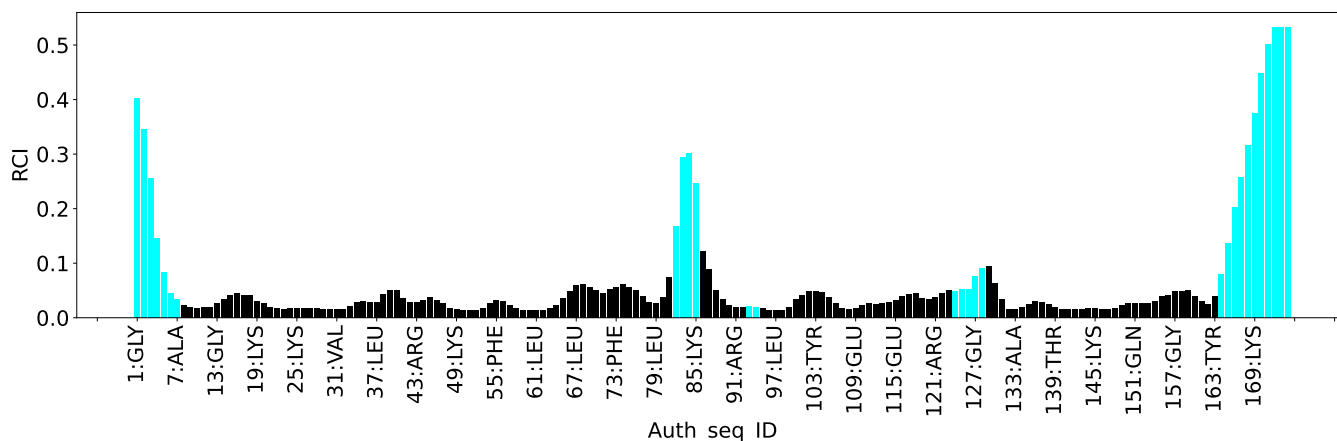
7.1.4 Statistically unusual chemical shifts [i](#)

There are no statistically unusual chemical shifts.

7.1.5 Random Coil Index (RCI) plots [i](#)

The image below reports *random coil index* values for the protein chains in the structure. The height of each bar gives a probability of a given residue to be disordered, as predicted from the available chemical shifts and the amino acid sequence. A value above 0.2 is an indication of significant predicted disorder. The colour of the bar shows whether the residue is in the well-defined core (black) or in the ill-defined residue ranges (cyan), as described in section 2 on ensemble composition. If well-defined core and ill-defined regions are not identified then it is shown as gray bars.

Random coil index (RCI) for chain A:



8 NMR restraints analysis

8.1 Conformationally restricting restraints

The following table provides the summary of experimentally observed NMR restraints in different categories. Restraints are classified into different categories based on the sequence separation of the atoms involved.

Description	Value
Total distance restraints	3466
Intra-residue ($ i-j =0$)	689
Sequential ($ i-j =1$)	989
Medium range ($ i-j >1$ and $ i-j <5$)	592
Long range ($ i-j \geq 5$)	1196
Inter-chain	0
Hydrogen bond restraints	0
Disulfide bond restraints	0
Total dihedral-angle restraints	0
Number of unmapped restraints	0
Number of restraints per residue	19.3
Number of long range restraints per residue ¹	6.6

¹Long range hydrogen bonds and disulfide bonds are counted as long range restraints while calculating the number of long range restraints per residue

8.2 Residual restraint violations

This section provides the overview of the restraint violations analysis. The violations are binned as small, medium and large violations based on its absolute value. Average number of violations per model is calculated by dividing the total number of violations in each bin by the size of the ensemble.

8.2.1 Average number of distance violations per model

Distance violations less than 0.1 Å are not included in the calculation.

Bins (Å)	Average number of violations per model	Max (Å)
0.1-0.2 (Small)	18.6	0.2
0.2-0.5 (Medium)	3.8	0.5
>0.5 (Large)	0.1	0.9

8.2.2 Average number of dihedral-angle violations per model [i](#)

Dihedral-angle violations less than 1° are not included in the calculation. There are no dihedral-angle violations

9 Distance violation analysis

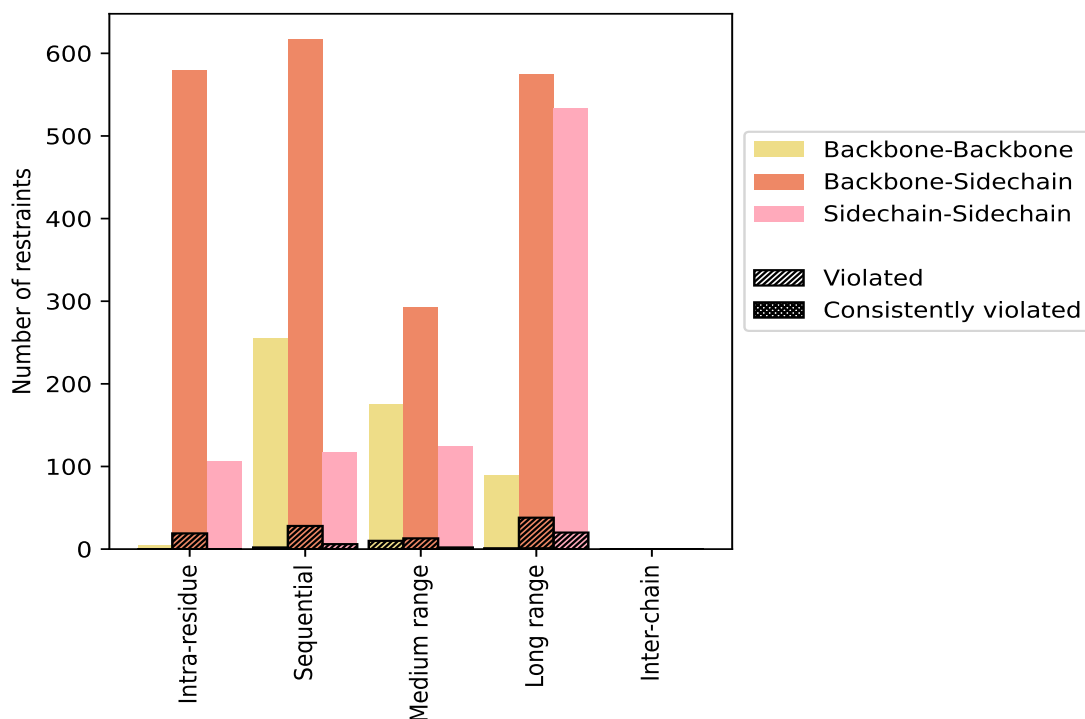
9.1 Summary of distance violations

The following table shows the summary of distance violations in different restraint categories based on the sequence separation of the atoms involved. Each category is further sub-divided into three sub-categories based on the atoms involved. Violations less than 0.1 Å are not included in the statistics.

Restrains type	Count	% ¹	Violated ³			Consistently Violated ⁴		
			Count	% ²	% ¹	Count	% ²	% ¹
Intra-residue ($i-j =0$)	689	19.9	19	2.8	0.5	0	0.0	0.0
Backbone-Backbone	4	0.1	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	579	16.7	19	3.3	0.5	0	0.0	0.0
Sidechain-Sidechain	106	3.1	0	0.0	0.0	0	0.0	0.0
Sequential ($i-j =1$)	989	28.5	36	3.6	1.0	0	0.0	0.0
Backbone-Backbone	255	7.4	2	0.8	0.1	0	0.0	0.0
Backbone-Sidechain	617	17.8	28	4.5	0.8	0	0.0	0.0
Sidechain-Sidechain	117	3.4	6	5.1	0.2	0	0.0	0.0
Medium range ($i-j >1$ & $i-j <5$)	592	17.1	25	4.2	0.7	0	0.0	0.0
Backbone-Backbone	175	5.0	10	5.7	0.3	0	0.0	0.0
Backbone-Sidechain	293	8.5	13	4.4	0.4	0	0.0	0.0
Sidechain-Sidechain	124	3.6	2	1.6	0.1	0	0.0	0.0
Long range ($i-j \geq 5$)	1196	34.5	59	4.9	1.7	1	0.1	0.0
Backbone-Backbone	89	2.6	1	1.1	0.0	0	0.0	0.0
Backbone-Sidechain	574	16.6	38	6.6	1.1	1	0.2	0.0
Sidechain-Sidechain	533	15.4	20	3.8	0.6	0	0.0	0.0
Inter-chain	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Backbone	0	0.0	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	0	0.0	0	0.0	0.0	0	0.0	0.0
Hydrogen bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Disulfide bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Total	3466	100.0	139	4.0	4.0	1	0.0	0.0
Backbone-Backbone	523	15.1	13	2.5	0.4	0	0.0	0.0
Backbone-Sidechain	2063	59.5	98	4.8	2.8	1	0.0	0.0
Sidechain-Sidechain	880	25.4	28	3.2	0.8	0	0.0	0.0

¹ percentage calculated with respect to the total number of distance restraints, ² percentage calculated with respect to the number of restraints in a particular restraint category, ³ violated in at least one model, ⁴ violated in all the models

9.1.1 Bar chart : Distribution of distance restraints and violations [i](#)



Violated and consistently violated restraints are shown using different hatch patterns in their respective categories. The hydrogen bonds and disulfied bonds are counted in their appropriate category on the x-axis

9.2 Distance violation statistics for each model [i](#)

The following table provides the distance violation statistics for each model in the ensemble. Violations less than 0.1 Å are not included in the statistics.

Model ID	Number of violations						Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total				
1	1	5	5	16	0	27	0.17	0.49	0.09	0.13
2	2	4	2	11	0	19	0.15	0.26	0.04	0.14
3	2	5	1	13	0	21	0.17	0.46	0.08	0.13
4	3	4	4	9	0	20	0.17	0.43	0.08	0.14
5	4	3	1	11	0	19	0.15	0.37	0.06	0.13
6	2	6	2	10	0	20	0.17	0.47	0.08	0.15
7	4	6	7	7	0	24	0.17	0.45	0.08	0.16
8	3	4	4	9	0	20	0.17	0.5	0.09	0.15
9	5	4	3	8	0	20	0.18	0.42	0.08	0.14
10	2	4	6	8	0	20	0.19	0.47	0.11	0.14
11	5	6	3	11	0	25	0.19	0.55	0.1	0.15

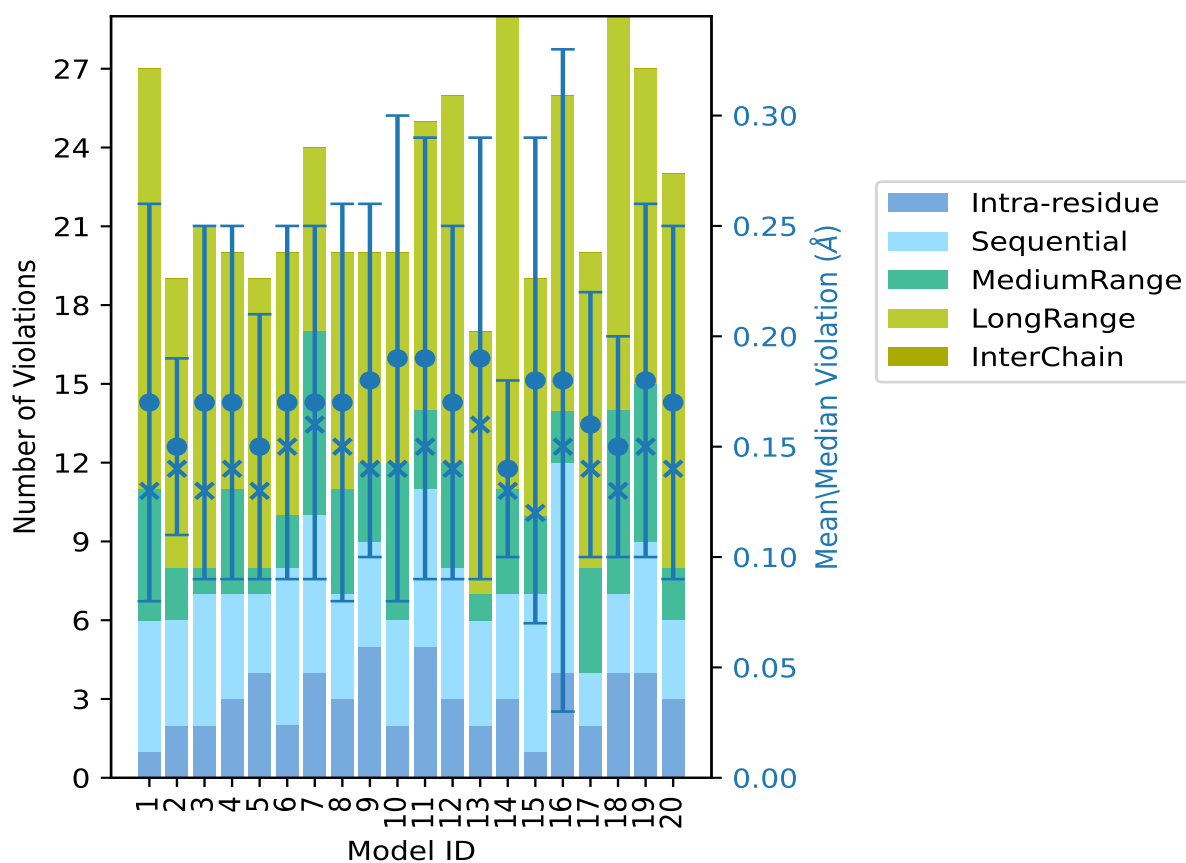
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Model ID	Number of violations					Total	Mean (Å)	Max (Å)	SD ⁶ (Å)	Median (Å)
	IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵					
12	3	5	4	14	0	26	0.17	0.39	0.08	0.14
13	2	4	1	10	0	17	0.19	0.51	0.1	0.16
14	3	4	4	18	0	29	0.14	0.31	0.04	0.13
15	1	6	3	9	0	19	0.18	0.45	0.11	0.12
16	4	8	2	12	0	26	0.18	0.9	0.15	0.15
17	2	2	4	12	0	20	0.16	0.31	0.06	0.14
18	4	3	7	15	0	29	0.15	0.33	0.05	0.13
19	4	5	6	12	0	27	0.18	0.5	0.08	0.15
20	3	3	2	15	0	23	0.17	0.42	0.08	0.14

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints, ⁵Inter-chain restraints, ⁶Standard deviation

9.2.1 Bar graph : Distance Violation statistics for each model [\(i\)](#)



The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis on the right

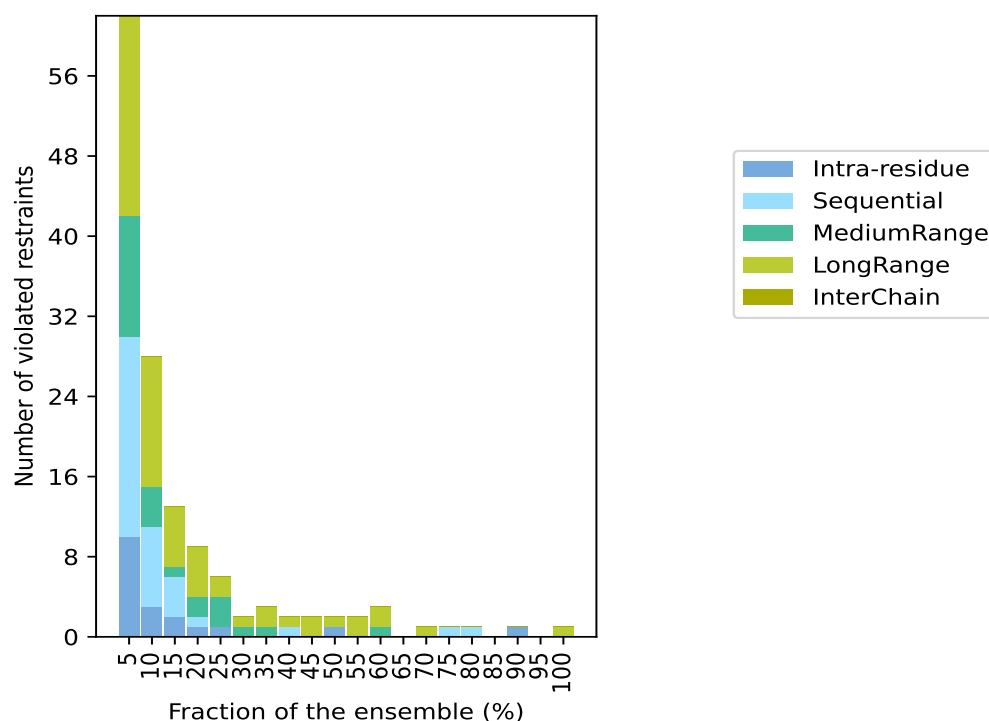
9.3 Distance violation statistics for the ensemble [i](#)

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 3327(IR:670, SQ:953, MR:567, LR:1137, IC:0) restraints are not violated in the ensemble.

Number of violated restraints						Fraction of the ensemble	
IR ¹	SQ ²	MR ³	LR ⁴	IC ⁵	Total	Count ⁶	%
10	20	12	20	0	62	1	5.0
3	8	4	13	0	28	2	10.0
2	4	1	6	0	13	3	15.0
1	1	2	5	0	9	4	20.0
1	0	3	2	0	6	5	25.0
0	0	1	1	0	2	6	30.0
0	0	1	2	0	3	7	35.0
0	1	0	1	0	2	8	40.0
0	0	0	2	0	2	9	45.0
1	0	0	1	0	2	10	50.0
0	0	0	2	0	2	11	55.0
0	0	1	2	0	3	12	60.0
0	0	0	0	0	0	13	65.0
0	0	0	1	0	1	14	70.0
0	1	0	0	0	1	15	75.0
0	1	0	0	0	1	16	80.0
0	0	0	0	0	0	17	85.0
1	0	0	0	0	1	18	90.0
0	0	0	0	0	0	19	95.0
0	0	0	1	0	1	20	100.0

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints, ⁵Inter-chain restraints, ⁶ Number of models with violations

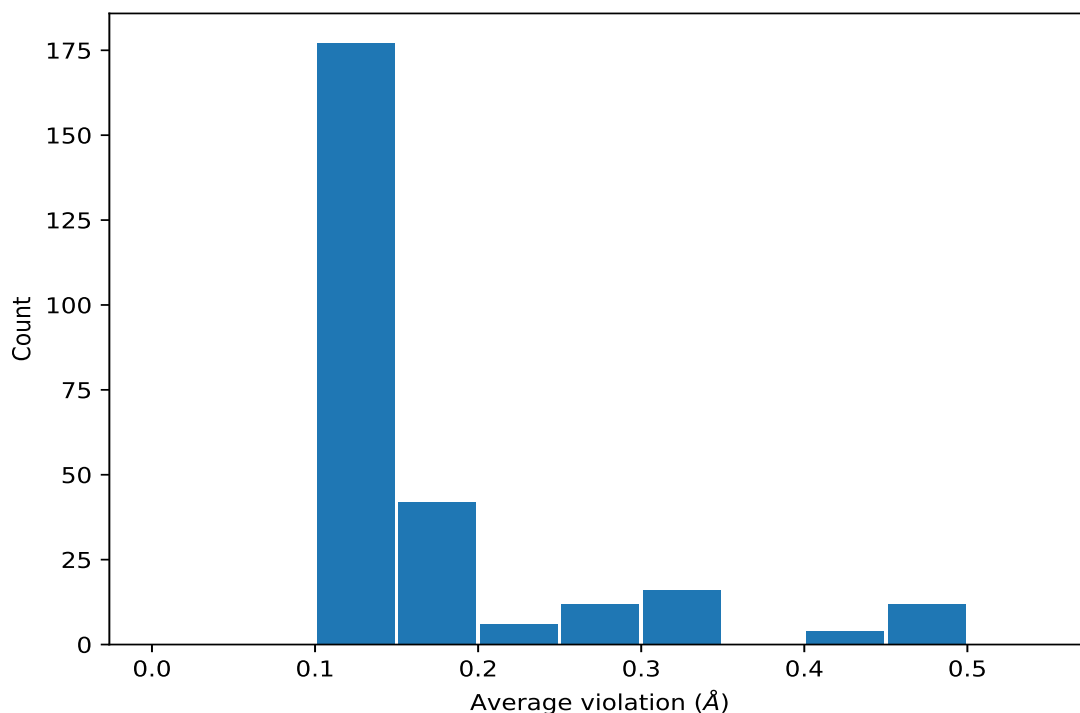
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



9.4 Most violated distance restraints in the ensemble [i](#)

9.4.1 Histogram : Distribution of mean distance violations [i](#)

The following histogram shows the distribution of the average value of the violation. The average is calculated for each restraint that is violated in more than one model over all the violated models in the ensemble



9.4.2 Table: Most violated distance restraints [i](#)

The following table provides the mean and the standard deviation of the violation for each restraint sorted by number of violated models and the mean value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	20	0.19	0.05	0.17
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	18	0.12	0.01	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	18	0.12	0.01	0.12
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	16	0.14	0.02	0.13
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	16	0.14	0.02	0.13
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	16	0.14	0.02	0.13
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	16	0.14	0.02	0.13
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	16	0.14	0.02	0.13
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	16	0.14	0.02	0.13
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	15	0.19	0.05	0.19
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	15	0.19	0.05	0.19
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	14	0.13	0.02	0.14
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	14	0.13	0.02	0.14
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	14	0.13	0.02	0.14
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	14	0.13	0.02	0.14
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	14	0.13	0.02	0.14

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	14	0.13	0.02	0.14
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	12	0.18	0.03	0.18
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	12	0.18	0.03	0.18
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	12	0.18	0.03	0.18
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	12	0.14	0.02	0.15
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	12	0.14	0.02	0.15
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	12	0.14	0.02	0.15
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	12	0.14	0.01	0.14
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	11	0.21	0.06	0.23
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	11	0.13	0.02	0.13
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	11	0.13	0.02	0.13
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	11	0.13	0.02	0.13
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	11	0.13	0.02	0.13
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	11	0.13	0.02	0.13
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	11	0.13	0.02	0.13
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	10	0.18	0.07	0.15
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	10	0.18	0.07	0.15
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	10	0.16	0.03	0.17
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	9	0.12	0.01	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	9	0.12	0.01	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	9	0.12	0.01	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	9	0.12	0.01	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	9	0.12	0.01	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	9	0.12	0.01	0.12
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	9	0.12	0.01	0.11
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	9	0.12	0.01	0.11
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	8	0.25	0.07	0.22
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	8	0.25	0.07	0.22
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	8	0.16	0.04	0.16
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	8	0.16	0.04	0.16
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	8	0.16	0.04	0.16
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG11	7	0.14	0.02	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG12	7	0.14	0.02	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG13	7	0.14	0.02	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG21	7	0.14	0.02	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG22	7	0.14	0.02	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG23	7	0.14	0.02	0.13
(1,3092)	1:A:107:GLN:HB2	1:A:122:LEU:HG	7	0.13	0.02	0.12
(1,3092)	1:A:107:GLN:HB3	1:A:122:LEU:HG	7	0.13	0.02	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG11	7	0.13	0.01	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG12	7	0.13	0.01	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG13	7	0.13	0.01	0.13

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG21	7	0.13	0.01	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG22	7	0.13	0.01	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG23	7	0.13	0.01	0.13
(1,2413)	1:A:10:LEU:HD11	1:A:79:LEU:HG	6	0.48	0.02	0.47
(1,2413)	1:A:10:LEU:HD12	1:A:79:LEU:HG	6	0.48	0.02	0.47
(1,2413)	1:A:10:LEU:HD13	1:A:79:LEU:HG	6	0.48	0.02	0.47
(1,2413)	1:A:10:LEU:HD21	1:A:79:LEU:HG	6	0.48	0.02	0.47
(1,2413)	1:A:10:LEU:HD22	1:A:79:LEU:HG	6	0.48	0.02	0.47
(1,2413)	1:A:10:LEU:HD23	1:A:79:LEU:HG	6	0.48	0.02	0.47
(1,761)	1:A:110:LEU:HA	1:A:114:PHE:H	6	0.13	0.01	0.12
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD11	5	0.17	0.02	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD12	5	0.17	0.02	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD13	5	0.17	0.02	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD21	5	0.17	0.02	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD22	5	0.17	0.02	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD23	5	0.17	0.02	0.17
(1,1875)	1:A:77:ILE:HD11	1:A:80:GLU:H	5	0.15	0.03	0.14
(1,1875)	1:A:77:ILE:HD12	1:A:80:GLU:H	5	0.15	0.03	0.14
(1,1875)	1:A:77:ILE:HD13	1:A:80:GLU:H	5	0.15	0.03	0.14
(1,2135)	1:A:135:ILE:HG21	1:A:137:PHE:H	5	0.15	0.03	0.14
(1,2135)	1:A:135:ILE:HG22	1:A:137:PHE:H	5	0.15	0.03	0.14
(1,2135)	1:A:135:ILE:HG23	1:A:137:PHE:H	5	0.15	0.03	0.14
(1,3018)	1:A:101:LEU:HD11	1:A:122:LEU:HG	5	0.14	0.02	0.13
(1,3018)	1:A:101:LEU:HD12	1:A:122:LEU:HG	5	0.14	0.02	0.13
(1,3018)	1:A:101:LEU:HD13	1:A:122:LEU:HG	5	0.14	0.02	0.13
(1,3018)	1:A:101:LEU:HD21	1:A:122:LEU:HG	5	0.14	0.02	0.13
(1,3018)	1:A:101:LEU:HD22	1:A:122:LEU:HG	5	0.14	0.02	0.13
(1,3018)	1:A:101:LEU:HD23	1:A:122:LEU:HG	5	0.14	0.02	0.13
(1,2128)	1:A:95:THR:HB	1:A:137:PHE:H	5	0.13	0.02	0.13
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG21	5	0.13	0.02	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG22	5	0.13	0.02	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG23	5	0.13	0.02	0.11
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE1	4	0.3	0.07	0.33
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE2	4	0.3	0.07	0.33
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG2	4	0.29	0.17	0.28
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG3	4	0.29	0.17	0.28
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD11	4	0.25	0.03	0.26
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD12	4	0.25	0.03	0.26
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD13	4	0.25	0.03	0.26
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD21	4	0.25	0.03	0.26
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD22	4	0.25	0.03	0.26
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD23	4	0.25	0.03	0.26

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,734)	1:A:109:GLU:HA	1:A:111:LYS:H	4	0.19	0.06	0.2
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD11	4	0.15	0.02	0.16
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD12	4	0.15	0.02	0.16
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD13	4	0.15	0.02	0.16
(1,1312)	1:A:55:PHE:HD1	1:A:62:GLU:H	4	0.14	0.02	0.14
(1,1312)	1:A:55:PHE:HD2	1:A:62:GLU:H	4	0.14	0.02	0.14
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD11	4	0.12	0.02	0.12
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD12	4	0.12	0.02	0.12
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD13	4	0.12	0.02	0.12
(1,2169)	1:A:96:LEU:HG	1:A:143:ALA:H	4	0.12	0.01	0.12
(1,42)	1:A:9:ASN:HB3	1:A:53:VAL:HB	4	0.11	0.0	0.11
(1,1311)	1:A:49:LYS:HB2	1:A:50:PHE:HE1	3	0.42	0.02	0.42
(1,1311)	1:A:49:LYS:HB2	1:A:50:PHE:HE2	3	0.42	0.02	0.42
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD11	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD12	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD13	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD21	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD22	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD23	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD11	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD12	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD13	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD21	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD22	3	0.31	0.1	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD23	3	0.31	0.1	0.38
(1,2297)	1:A:169:LYS:HA	1:A:170:GLY:H	3	0.18	0.0	0.18
(1,3109)	1:A:109:GLU:H	1:A:109:GLU:HG2	3	0.18	0.06	0.14
(1,3109)	1:A:109:GLU:H	1:A:109:GLU:HG3	3	0.18	0.06	0.14
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG21	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG22	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG23	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG21	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG22	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG23	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG21	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG22	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG23	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG21	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG22	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG23	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG21	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG22	3	0.15	0.02	0.14

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG23	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG21	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG22	3	0.15	0.02	0.14
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG23	3	0.15	0.02	0.14
(1,3281)	1:A:130:LYS:HA	1:A:130:LYS:HD2	3	0.14	0.01	0.13
(1,3281)	1:A:130:LYS:HA	1:A:130:LYS:HD3	3	0.14	0.01	0.13
(1,450)	1:A:67:LEU:HD21	1:A:68:THR:H	3	0.13	0.03	0.12
(1,450)	1:A:67:LEU:HD22	1:A:68:THR:H	3	0.13	0.03	0.12
(1,450)	1:A:67:LEU:HD23	1:A:68:THR:H	3	0.13	0.03	0.12
(1,2437)	1:A:12:VAL:HG11	1:A:50:PHE:HD1	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG11	1:A:50:PHE:HD2	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG12	1:A:50:PHE:HD1	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG12	1:A:50:PHE:HD2	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG13	1:A:50:PHE:HD1	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG13	1:A:50:PHE:HD2	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG21	1:A:50:PHE:HD1	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG21	1:A:50:PHE:HD2	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG22	1:A:50:PHE:HD1	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG22	1:A:50:PHE:HD2	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG23	1:A:50:PHE:HD1	3	0.13	0.01	0.14
(1,2437)	1:A:12:VAL:HG23	1:A:50:PHE:HD2	3	0.13	0.01	0.14
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD11	3	0.13	0.02	0.13
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD12	3	0.13	0.02	0.13
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD13	3	0.13	0.02	0.13
(1,837)	1:A:114:PHE:HZ	1:A:120:ILE:HB	3	0.12	0.01	0.12
(1,2207)	1:A:113:VAL:HB	1:A:151:GLN:H	3	0.12	0.01	0.11
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD11	3	0.12	0.0	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD12	3	0.12	0.0	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD13	3	0.12	0.0	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD21	3	0.12	0.0	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD22	3	0.12	0.0	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD23	3	0.12	0.0	0.12
(1,1139)	1:A:151:GLN:HB2	1:A:161:SER:HA	3	0.11	0.0	0.11
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD11	2	0.48	0.02	0.48
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD12	2	0.48	0.02	0.48
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD13	2	0.48	0.02	0.48
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD21	2	0.48	0.02	0.48
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD22	2	0.48	0.02	0.48
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD23	2	0.48	0.02	0.48
(1,3438)	1:A:170:GLY:H	1:A:171:GLU:HG2	2	0.43	0.0	0.43
(1,3438)	1:A:170:GLY:H	1:A:171:GLU:HG3	2	0.43	0.0	0.43
(1,3416)	1:A:167:GLU:H	1:A:167:GLU:HG2	2	0.34	0.0	0.34

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,3416)	1:A:167:GLU:H	1:A:167:GLU:HG3	2	0.34	0.0	0.34
(1,3360)	1:A:150:LYS:HB2	1:A:151:GLN:H	2	0.31	0.0	0.31
(1,3360)	1:A:150:LYS:HB3	1:A:151:GLN:H	2	0.31	0.0	0.31
(1,1259)	1:A:164:TYR:HD1	1:A:165:THR:HB	2	0.23	0.03	0.23
(1,1259)	1:A:164:TYR:HD2	1:A:165:THR:HB	2	0.23	0.03	0.23
(1,2208)	1:A:146:THR:HG21	1:A:151:GLN:H	2	0.23	0.06	0.23
(1,2208)	1:A:146:THR:HG22	1:A:151:GLN:H	2	0.23	0.06	0.23
(1,2208)	1:A:146:THR:HG23	1:A:151:GLN:H	2	0.23	0.06	0.23
(1,1642)	1:A:112:GLU:HA	1:A:114:PHE:H	2	0.19	0.02	0.19
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD21	2	0.18	0.02	0.18
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD22	2	0.18	0.02	0.18
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD23	2	0.18	0.02	0.18
(1,1304)	1:A:16:ASN:HA	1:A:17:PHE:HD1	2	0.18	0.02	0.18
(1,1304)	1:A:16:ASN:HA	1:A:17:PHE:HD2	2	0.18	0.02	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD11	2	0.18	0.0	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD12	2	0.18	0.0	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD13	2	0.18	0.0	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD21	2	0.18	0.0	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD22	2	0.18	0.0	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD23	2	0.18	0.0	0.18
(1,934)	1:A:122:LEU:HG	1:A:133:ALA:HA	2	0.18	0.0	0.18
(1,2101)	1:A:123:VAL:HB	1:A:132:ILE:H	2	0.17	0.04	0.17
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD11	2	0.16	0.0	0.16
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD12	2	0.16	0.0	0.16
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD13	2	0.16	0.0	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD11	2	0.16	0.0	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD12	2	0.16	0.0	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD13	2	0.16	0.0	0.16
(1,551)	1:A:79:LEU:H	1:A:79:LEU:HG	2	0.15	0.03	0.15
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB1	2	0.15	0.0	0.15
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB2	2	0.15	0.0	0.15
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB3	2	0.15	0.0	0.15
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB1	2	0.15	0.0	0.15
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB2	2	0.15	0.0	0.15
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB3	2	0.15	0.0	0.15
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB1	2	0.15	0.0	0.15
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB2	2	0.15	0.0	0.15
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB3	2	0.15	0.0	0.15
(1,629)	1:A:97:LEU:HG	1:A:163:TYR:HD1	2	0.14	0.01	0.14
(1,629)	1:A:97:LEU:HG	1:A:163:TYR:HD2	2	0.14	0.01	0.14
(1,687)	1:A:102:PRO:HA	1:A:158:ARG:HD3	2	0.14	0.01	0.14
(1,3439)	1:A:170:GLY:H	1:A:173:LEU:HB2	2	0.14	0.0	0.14

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Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,3439)	1:A:170:GLY:H	1:A:173:LEU:HB3	2	0.14	0.0	0.14
(1,3308)	1:A:140:GLU:HB2	1:A:141:ALA:H	2	0.14	0.01	0.14
(1,3308)	1:A:140:GLU:HB3	1:A:141:ALA:H	2	0.14	0.01	0.14
(1,2137)	1:A:138:LYS:H	1:A:142:ASP:H	2	0.13	0.0	0.13
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG21	2	0.12	0.02	0.12
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG22	2	0.12	0.02	0.12
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG23	2	0.12	0.02	0.12
(1,2483)	1:A:15:LEU:HD11	1:A:49:LYS:HA	2	0.12	0.01	0.12
(1,2483)	1:A:15:LEU:HD12	1:A:49:LYS:HA	2	0.12	0.01	0.12
(1,2483)	1:A:15:LEU:HD13	1:A:49:LYS:HA	2	0.12	0.01	0.12
(1,2483)	1:A:15:LEU:HD21	1:A:49:LYS:HA	2	0.12	0.01	0.12
(1,2483)	1:A:15:LEU:HD22	1:A:49:LYS:HA	2	0.12	0.01	0.12
(1,2483)	1:A:15:LEU:HD23	1:A:49:LYS:HA	2	0.12	0.01	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD11	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD12	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD13	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD21	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD22	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD23	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD11	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD12	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD13	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD21	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD22	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD23	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD11	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD12	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD13	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD21	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD22	2	0.12	0.0	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD23	2	0.12	0.0	0.12
(1,3120)	1:A:109:GLU:HG2	1:A:155:ILE:HB	2	0.12	0.0	0.12
(1,3120)	1:A:109:GLU:HG3	1:A:155:ILE:HB	2	0.12	0.0	0.12
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG21	2	0.11	0.0	0.11
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG22	2	0.11	0.0	0.11
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG23	2	0.11	0.0	0.11
(1,1469)	1:A:17:PHE:H	1:A:48:ARG:HB2	2	0.11	0.0	0.11
(1,3326)	1:A:144:GLU:HG2	1:A:164:TYR:HE1	2	0.11	0.0	0.11
(1,3326)	1:A:144:GLU:HG2	1:A:164:TYR:HE2	2	0.11	0.0	0.11
(1,3326)	1:A:144:GLU:HG3	1:A:164:TYR:HE1	2	0.11	0.0	0.11
(1,3326)	1:A:144:GLU:HG3	1:A:164:TYR:HE2	2	0.11	0.0	0.11
(1,3357)	1:A:149:GLU:HG2	1:A:150:LYS:H	2	0.11	0.0	0.11

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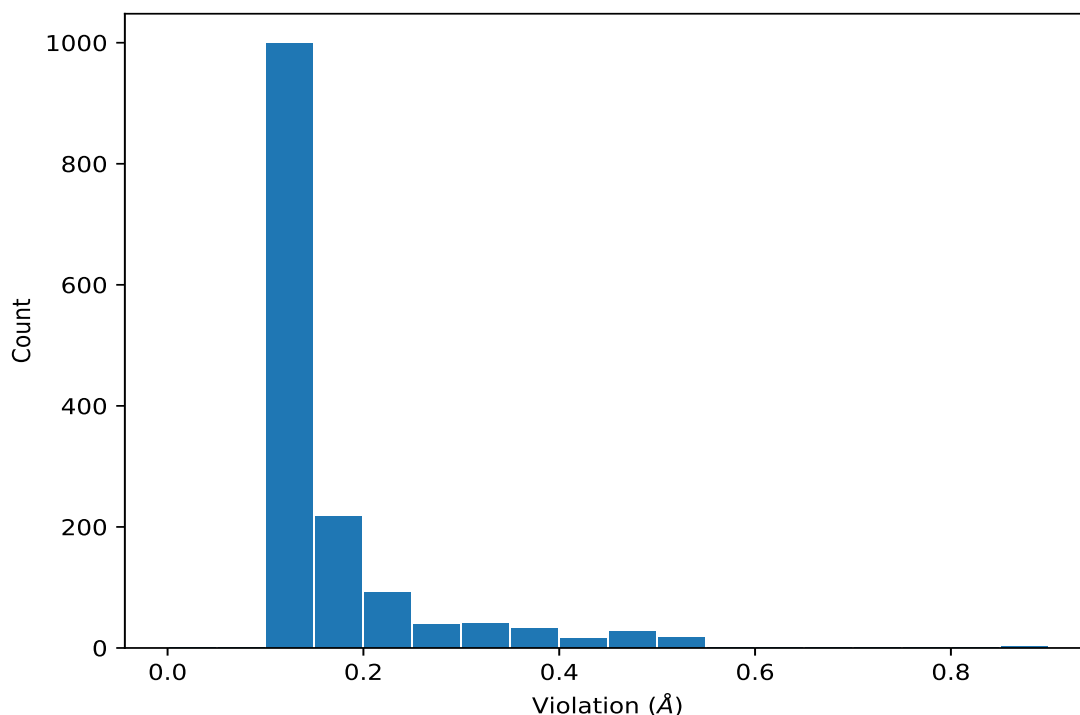
Key	Atom-1	Atom-2	Models ¹	Mean (Å)	SD ¹ (Å)	Median (Å)
(1,3357)	1:A:149:GLU:HG3	1:A:150:LYS:H	2	0.11	0.0	0.11

¹Number of violated models, ²Standard deviation

9.5 All violated distance restraints [i](#)

9.5.1 Histogram : Distribution of distance violations [i](#)

The following histogram shows the distribution of the absolute value of the violation for all violated restraints in the ensemble.



9.5.2 Table : All distance violations [i](#)

The following table lists the absolute value of the violation for each restraint in the ensemble sorted by its value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2362)	1:A:3:GLU:HB2	1:A:4:PRO:HA	16	0.9
(1,2362)	1:A:3:GLU:HB3	1:A:4:PRO:HA	16	0.9
(1,431)	1:A:171:GLU:HB2	1:A:172:GLY:H	11	0.55

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2413)	1:A:10:LEU:HD11	1:A:79:LEU:HG	13	0.51
(1,2413)	1:A:10:LEU:HD12	1:A:79:LEU:HG	13	0.51
(1,2413)	1:A:10:LEU:HD13	1:A:79:LEU:HG	13	0.51
(1,2413)	1:A:10:LEU:HD21	1:A:79:LEU:HG	13	0.51
(1,2413)	1:A:10:LEU:HD22	1:A:79:LEU:HG	13	0.51
(1,2413)	1:A:10:LEU:HD23	1:A:79:LEU:HG	13	0.51
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD11	19	0.5
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD12	19	0.5
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD13	19	0.5
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD21	19	0.5
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD22	19	0.5
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD23	19	0.5
(1,2413)	1:A:10:LEU:HD11	1:A:79:LEU:HG	8	0.5
(1,2413)	1:A:10:LEU:HD12	1:A:79:LEU:HG	8	0.5
(1,2413)	1:A:10:LEU:HD13	1:A:79:LEU:HG	8	0.5
(1,2413)	1:A:10:LEU:HD21	1:A:79:LEU:HG	8	0.5
(1,2413)	1:A:10:LEU:HD22	1:A:79:LEU:HG	8	0.5
(1,2413)	1:A:10:LEU:HD23	1:A:79:LEU:HG	8	0.5
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG2	1	0.49
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG3	1	0.49
(1,2413)	1:A:10:LEU:HD11	1:A:79:LEU:HG	6	0.47
(1,2413)	1:A:10:LEU:HD12	1:A:79:LEU:HG	6	0.47
(1,2413)	1:A:10:LEU:HD13	1:A:79:LEU:HG	6	0.47
(1,2413)	1:A:10:LEU:HD21	1:A:79:LEU:HG	6	0.47
(1,2413)	1:A:10:LEU:HD22	1:A:79:LEU:HG	6	0.47
(1,2413)	1:A:10:LEU:HD23	1:A:79:LEU:HG	6	0.47
(1,2413)	1:A:10:LEU:HD11	1:A:79:LEU:HG	10	0.47
(1,2413)	1:A:10:LEU:HD12	1:A:79:LEU:HG	10	0.47
(1,2413)	1:A:10:LEU:HD13	1:A:79:LEU:HG	10	0.47
(1,2413)	1:A:10:LEU:HD21	1:A:79:LEU:HG	10	0.47
(1,2413)	1:A:10:LEU:HD22	1:A:79:LEU:HG	10	0.47
(1,2413)	1:A:10:LEU:HD23	1:A:79:LEU:HG	10	0.47
(1,2413)	1:A:10:LEU:HD11	1:A:79:LEU:HG	3	0.46
(1,2413)	1:A:10:LEU:HD12	1:A:79:LEU:HG	3	0.46
(1,2413)	1:A:10:LEU:HD13	1:A:79:LEU:HG	3	0.46
(1,2413)	1:A:10:LEU:HD21	1:A:79:LEU:HG	3	0.46
(1,2413)	1:A:10:LEU:HD22	1:A:79:LEU:HG	3	0.46
(1,2413)	1:A:10:LEU:HD23	1:A:79:LEU:HG	3	0.46
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD11	7	0.45
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD12	7	0.45
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD13	7	0.45
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD21	7	0.45

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD22	7	0.45
(1,3462)	1:A:173:LEU:HA	1:A:173:LEU:HD23	7	0.45
(1,1311)	1:A:49:LYS:HB2	1:A:50:PHE:HE1	15	0.45
(1,1311)	1:A:49:LYS:HB2	1:A:50:PHE:HE2	15	0.45
(1,2413)	1:A:10:LEU:HD11	1:A:79:LEU:HG	15	0.44
(1,2413)	1:A:10:LEU:HD12	1:A:79:LEU:HG	15	0.44
(1,2413)	1:A:10:LEU:HD13	1:A:79:LEU:HG	15	0.44
(1,2413)	1:A:10:LEU:HD21	1:A:79:LEU:HG	15	0.44
(1,2413)	1:A:10:LEU:HD22	1:A:79:LEU:HG	15	0.44
(1,2413)	1:A:10:LEU:HD23	1:A:79:LEU:HG	15	0.44
(1,3438)	1:A:170:GLY:H	1:A:171:GLU:HG2	4	0.43
(1,3438)	1:A:170:GLY:H	1:A:171:GLU:HG3	4	0.43
(1,3438)	1:A:170:GLY:H	1:A:171:GLU:HG2	10	0.43
(1,3438)	1:A:170:GLY:H	1:A:171:GLU:HG3	10	0.43
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG2	9	0.42
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG3	9	0.42
(1,1311)	1:A:49:LYS:HB2	1:A:50:PHE:HE1	20	0.42
(1,1311)	1:A:49:LYS:HB2	1:A:50:PHE:HE2	20	0.42
(1,2300)	1:A:171:GLU:HB3	1:A:172:GLY:H	11	0.4
(1,3442)	1:A:170:GLY:HA2	1:A:173:LEU:H	7	0.39
(1,3442)	1:A:170:GLY:HA3	1:A:173:LEU:H	7	0.39
(1,1311)	1:A:49:LYS:HB2	1:A:50:PHE:HE1	12	0.39
(1,1311)	1:A:49:LYS:HB2	1:A:50:PHE:HE2	12	0.39
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD11	4	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD12	4	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD13	4	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD21	4	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD22	4	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD23	4	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD11	4	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD12	4	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD13	4	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD21	4	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD22	4	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD23	4	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD11	10	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD12	10	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD13	10	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD21	10	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD22	10	0.38
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD23	10	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD11	10	0.38

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD12	10	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD13	10	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD21	10	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD22	10	0.38
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD23	10	0.38
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	5	0.37
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	5	0.37
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE1	12	0.36
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE2	12	0.36
(1,3416)	1:A:167:GLU:H	1:A:167:GLU:HG2	9	0.35
(1,3416)	1:A:167:GLU:H	1:A:167:GLU:HG3	9	0.35
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	12	0.35
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	12	0.35
(1,3465)	1:A:173:LEU:HB2	1:A:174:GLU:H	19	0.34
(1,3465)	1:A:173:LEU:HB3	1:A:174:GLU:H	19	0.34
(1,3416)	1:A:167:GLU:H	1:A:167:GLU:HG2	13	0.34
(1,3416)	1:A:167:GLU:H	1:A:167:GLU:HG3	13	0.34
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE1	20	0.34
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE2	20	0.34
(1,3451)	1:A:171:GLU:HG2	1:A:172:GLY:H	11	0.33
(1,3451)	1:A:171:GLU:HG3	1:A:172:GLY:H	11	0.33
(1,2645)	1:A:34:LYS:H	1:A:34:LYS:HD2	18	0.33
(1,2645)	1:A:34:LYS:H	1:A:34:LYS:HD3	18	0.33
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE1	15	0.32
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE2	15	0.32
(1,432)	1:A:171:GLU:H	1:A:171:GLU:HB2	11	0.31
(1,3360)	1:A:150:LYS:HB2	1:A:151:GLN:H	8	0.31
(1,3360)	1:A:150:LYS:HB3	1:A:151:GLN:H	8	0.31
(1,3360)	1:A:150:LYS:HB2	1:A:151:GLN:H	17	0.31
(1,3360)	1:A:150:LYS:HB3	1:A:151:GLN:H	17	0.31
(1,3342)	1:A:146:THR:HG21	1:A:162:LEU:HD11	1	0.31
(1,3342)	1:A:146:THR:HG21	1:A:162:LEU:HD12	1	0.31
(1,3342)	1:A:146:THR:HG21	1:A:162:LEU:HD13	1	0.31
(1,3342)	1:A:146:THR:HG21	1:A:162:LEU:HD21	1	0.31
(1,3342)	1:A:146:THR:HG21	1:A:162:LEU:HD22	1	0.31
(1,3342)	1:A:146:THR:HG21	1:A:162:LEU:HD23	1	0.31
(1,3342)	1:A:146:THR:HG22	1:A:162:LEU:HD11	1	0.31
(1,3342)	1:A:146:THR:HG22	1:A:162:LEU:HD12	1	0.31
(1,3342)	1:A:146:THR:HG22	1:A:162:LEU:HD13	1	0.31
(1,3342)	1:A:146:THR:HG22	1:A:162:LEU:HD21	1	0.31
(1,3342)	1:A:146:THR:HG22	1:A:162:LEU:HD22	1	0.31
(1,3342)	1:A:146:THR:HG22	1:A:162:LEU:HD23	1	0.31

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3342)	1:A:146:THR:HG23	1:A:162:LEU:HD11	1	0.31
(1,3342)	1:A:146:THR:HG23	1:A:162:LEU:HD12	1	0.31
(1,3342)	1:A:146:THR:HG23	1:A:162:LEU:HD13	1	0.31
(1,3342)	1:A:146:THR:HG23	1:A:162:LEU:HD21	1	0.31
(1,3342)	1:A:146:THR:HG23	1:A:162:LEU:HD22	1	0.31
(1,3342)	1:A:146:THR:HG23	1:A:162:LEU:HD23	1	0.31
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	14	0.31
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	14	0.31
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	1	0.3
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	1	0.3
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	15	0.29
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	20	0.28
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	20	0.28
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD11	17	0.28
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD12	17	0.28
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD13	17	0.28
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD21	17	0.28
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD22	17	0.28
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD23	17	0.28
(1,2208)	1:A:146:THR:HG21	1:A:151:GLN:H	1	0.28
(1,2208)	1:A:146:THR:HG22	1:A:151:GLN:H	1	0.28
(1,2208)	1:A:146:THR:HG23	1:A:151:GLN:H	1	0.28
(1,3109)	1:A:109:GLU:H	1:A:109:GLU:HG2	9	0.27
(1,3109)	1:A:109:GLU:H	1:A:109:GLU:HG3	9	0.27
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD11	13	0.27
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD12	13	0.27
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD13	13	0.27
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD21	13	0.27
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD22	13	0.27
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD23	13	0.27
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	2	0.26
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	19	0.26
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	10	0.26
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	3	0.26
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	3	0.26
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	9	0.26
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	9	0.26
(1,1259)	1:A:164:TYR:HD1	1:A:165:THR:HB	3	0.26
(1,1259)	1:A:164:TYR:HD2	1:A:165:THR:HB	3	0.26
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	16	0.25
(1,734)	1:A:109:GLU:HA	1:A:111:LYS:H	18	0.25
(1,734)	1:A:109:GLU:HA	1:A:111:LYS:H	19	0.25

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	6	0.25
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	16	0.25
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	17	0.25
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	17	0.25
(1,1349)	1:A:2:THR:HB	1:A:3:GLU:H	1	0.25
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	17	0.24
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	17	0.24
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	17	0.24
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	18	0.24
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	8	0.24
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD11	6	0.24
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD12	6	0.24
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD13	6	0.24
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD21	6	0.24
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD22	6	0.24
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD23	6	0.24
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	3	0.23
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	5	0.23
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	9	0.23
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	12	0.23
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	13	0.23
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	9	0.23
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	9	0.23
(1,1047)	1:A:140:GLU:HA	1:A:140:GLU:HG3	6	0.23
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	15	0.22
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	15	0.22
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	15	0.22
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	16	0.22
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	5	0.21
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	5	0.21
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	5	0.21
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	19	0.21
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	19	0.21
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	19	0.21
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	11	0.21
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	11	0.21
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	12	0.21
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	12	0.21
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	12	0.21
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	12	0.21
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	12	0.21
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	12	0.21

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD11	8	0.21
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD12	8	0.21
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD13	8	0.21
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD21	8	0.21
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD22	8	0.21
(1,2375)	1:A:8:PHE:H	1:A:61:LEU:HD23	8	0.21
(1,2101)	1:A:123:VAL:HB	1:A:132:ILE:H	11	0.21
(1,1875)	1:A:77:ILE:HD11	1:A:80:GLU:H	18	0.21
(1,1875)	1:A:77:ILE:HD12	1:A:80:GLU:H	18	0.21
(1,1875)	1:A:77:ILE:HD13	1:A:80:GLU:H	18	0.21
(1,1642)	1:A:112:GLU:HA	1:A:114:PHE:H	18	0.21
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	3	0.21
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	3	0.21
(1,1304)	1:A:16:ASN:HA	1:A:17:PHE:HD1	19	0.21
(1,1304)	1:A:16:ASN:HA	1:A:17:PHE:HD2	19	0.21
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	16	0.2
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	16	0.2
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	16	0.2
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	13	0.2
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	13	0.2
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	13	0.2
(1,3459)	1:A:173:LEU:H	1:A:173:LEU:HB2	7	0.2
(1,3459)	1:A:173:LEU:H	1:A:173:LEU:HB3	7	0.2
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	20	0.2
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	6	0.2
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	6	0.2
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD11	13	0.2
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD12	13	0.2
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD13	13	0.2
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD21	13	0.2
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD22	13	0.2
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD23	13	0.2
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	16	0.2
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	16	0.2
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	16	0.2
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	16	0.2
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	16	0.2
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	16	0.2
(1,2299)	1:A:171:GLU:H	1:A:171:GLU:HB3	11	0.2
(1,2135)	1:A:135:ILE:HG21	1:A:137:PHE:H	18	0.2
(1,2135)	1:A:135:ILE:HG22	1:A:137:PHE:H	18	0.2
(1,2135)	1:A:135:ILE:HG23	1:A:137:PHE:H	18	0.2

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	2	0.2
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	2	0.2
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	4	0.2
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	4	0.2
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	7	0.2
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	7	0.2
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	11	0.2
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	11	0.2
(1,1259)	1:A:164:TYR:HD1	1:A:165:THR:HB	12	0.2
(1,1259)	1:A:164:TYR:HD2	1:A:165:THR:HB	12	0.2
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD21	20	0.2
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD22	20	0.2
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD23	20	0.2
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	12	0.19
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	1	0.19
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	1	0.19
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD11	19	0.19
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD12	19	0.19
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD13	19	0.19
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD21	19	0.19
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD22	19	0.19
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD23	19	0.19
(1,2305)	1:A:173:LEU:H	1:A:174:GLU:H	7	0.19
(1,2297)	1:A:169:LYS:HA	1:A:170:GLY:H	13	0.19
(1,2276)	1:A:97:LEU:HB3	1:A:163:TYR:H	1	0.19
(1,1916)	1:A:93:ALA:HA	1:A:95:THR:H	17	0.19
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	12	0.19
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	15	0.19
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	15	0.19
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE1	14	0.19
(1,1310)	1:A:47:THR:HA	1:A:50:PHE:HE2	14	0.19
(1,934)	1:A:122:LEU:HG	1:A:133:ALA:HA	6	0.18
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	2	0.18
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	2	0.18
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	2	0.18
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	20	0.18
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	20	0.18
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	20	0.18
(1,551)	1:A:79:LEU:H	1:A:79:LEU:HG	16	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD11	4	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD12	4	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD13	4	0.18

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD21	4	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD22	4	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD23	4	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD11	10	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD12	10	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD13	10	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD21	10	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD22	10	0.18
(1,3440)	1:A:170:GLY:H	1:A:173:LEU:HD23	10	0.18
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	14	0.18
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG11	8	0.18
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG12	8	0.18
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG13	8	0.18
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG21	8	0.18
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG22	8	0.18
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG23	8	0.18
(1,3119)	1:A:109:GLU:HG2	1:A:110:LEU:HA	8	0.18
(1,3119)	1:A:109:GLU:HG3	1:A:110:LEU:HA	8	0.18
(1,3092)	1:A:107:GLN:HB2	1:A:122:LEU:HG	12	0.18
(1,3092)	1:A:107:GLN:HB3	1:A:122:LEU:HG	12	0.18
(1,2297)	1:A:169:LYS:HA	1:A:170:GLY:H	6	0.18
(1,2297)	1:A:169:LYS:HA	1:A:170:GLY:H	19	0.18
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	14	0.18
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	10	0.18
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	10	0.18
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	16	0.18
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	16	0.18
(1,934)	1:A:122:LEU:HG	1:A:133:ALA:HA	13	0.17
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	3	0.17
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	3	0.17
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	3	0.17
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	12	0.17
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	12	0.17
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	12	0.17
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	8	0.17
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	8	0.17
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	8	0.17
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	10	0.17
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	10	0.17
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	10	0.17
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	7	0.17
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	7	0.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	7	0.17
(1,450)	1:A:67:LEU:HD21	1:A:68:THR:H	16	0.17
(1,450)	1:A:67:LEU:HD22	1:A:68:THR:H	16	0.17
(1,450)	1:A:67:LEU:HD23	1:A:68:THR:H	16	0.17
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD11	10	0.17
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD12	10	0.17
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD13	10	0.17
(1,3412)	1:A:165:THR:HG21	1:A:166:GLY:HA2	3	0.17
(1,3412)	1:A:165:THR:HG21	1:A:166:GLY:HA3	3	0.17
(1,3412)	1:A:165:THR:HG22	1:A:166:GLY:HA2	3	0.17
(1,3412)	1:A:165:THR:HG22	1:A:166:GLY:HA3	3	0.17
(1,3412)	1:A:165:THR:HG23	1:A:166:GLY:HA2	3	0.17
(1,3412)	1:A:165:THR:HG23	1:A:166:GLY:HA3	3	0.17
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	2	0.17
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	3	0.17
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	4	0.17
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	7	0.17
(1,3018)	1:A:101:LEU:HD11	1:A:122:LEU:HG	11	0.17
(1,3018)	1:A:101:LEU:HD12	1:A:122:LEU:HG	11	0.17
(1,3018)	1:A:101:LEU:HD13	1:A:122:LEU:HG	11	0.17
(1,3018)	1:A:101:LEU:HD21	1:A:122:LEU:HG	11	0.17
(1,3018)	1:A:101:LEU:HD22	1:A:122:LEU:HG	11	0.17
(1,3018)	1:A:101:LEU:HD23	1:A:122:LEU:HG	11	0.17
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG21	10	0.17
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG22	10	0.17
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG23	10	0.17
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG21	10	0.17
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG22	10	0.17
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG23	10	0.17
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG21	10	0.17
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG22	10	0.17
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG23	10	0.17
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG21	10	0.17
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG22	10	0.17
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG23	10	0.17
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG21	10	0.17
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG22	10	0.17
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG23	10	0.17
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG21	10	0.17
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG22	10	0.17
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG23	10	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD11	2	0.17

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD12	2	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD13	2	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD21	2	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD22	2	0.17
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD23	2	0.17
(1,2208)	1:A:146:THR:HG21	1:A:151:GLN:H	11	0.17
(1,2208)	1:A:146:THR:HG22	1:A:151:GLN:H	11	0.17
(1,2208)	1:A:146:THR:HG23	1:A:151:GLN:H	11	0.17
(1,1875)	1:A:77:ILE:HD11	1:A:80:GLU:H	14	0.17
(1,1875)	1:A:77:ILE:HD12	1:A:80:GLU:H	14	0.17
(1,1875)	1:A:77:ILE:HD13	1:A:80:GLU:H	14	0.17
(1,1642)	1:A:112:GLU:HA	1:A:114:PHE:H	19	0.17
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	2	0.17
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	7	0.17
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	15	0.17
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD21	6	0.17
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD22	6	0.17
(1,1187)	1:A:16:ASN:H	1:A:24:LEU:HD23	6	0.17
(1,1167)	1:A:171:GLU:HA	1:A:173:LEU:H	7	0.17
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	18	0.16
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	18	0.16
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	18	0.16
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	11	0.16
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	11	0.16
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	11	0.16
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	12	0.16
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	12	0.16
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	12	0.16
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD11	9	0.16
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD12	9	0.16
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD13	9	0.16
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD11	19	0.16
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD12	19	0.16
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD13	19	0.16
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD11	7	0.16
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD12	7	0.16
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD13	7	0.16
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD21	7	0.16
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD22	7	0.16
(1,3454)	1:A:171:GLU:HG2	1:A:173:LEU:HD23	7	0.16
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD11	7	0.16
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD12	7	0.16

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD13	7	0.16
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD21	7	0.16
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD22	7	0.16
(1,3454)	1:A:171:GLU:HG3	1:A:173:LEU:HD23	7	0.16
(1,3281)	1:A:130:LYS:HA	1:A:130:LYS:HD2	8	0.16
(1,3281)	1:A:130:LYS:HA	1:A:130:LYS:HD3	8	0.16
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD11	6	0.16
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD12	6	0.16
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD13	6	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD11	6	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD12	6	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD13	6	0.16
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD11	20	0.16
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD12	20	0.16
(1,3190)	1:A:119:GLU:HG2	1:A:120:ILE:HD13	20	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD11	20	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD12	20	0.16
(1,3190)	1:A:119:GLU:HG3	1:A:120:ILE:HD13	20	0.16
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	17	0.16
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG11	1	0.16
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG12	1	0.16
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG13	1	0.16
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG21	1	0.16
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG22	1	0.16
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG23	1	0.16
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD11	14	0.16
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD12	14	0.16
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD13	14	0.16
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD21	14	0.16
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD22	14	0.16
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD23	14	0.16
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	19	0.16
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	19	0.16
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	19	0.16
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	19	0.16
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	19	0.16
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	19	0.16
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	16	0.16
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	16	0.16
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	16	0.16
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	16	0.16
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	16	0.16

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	16	0.16
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	17	0.16
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	17	0.16
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	17	0.16
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	17	0.16
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	17	0.16
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	17	0.16
(1,2302)	1:A:171:GLU:HB2	1:A:173:LEU:H	7	0.16
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG21	20	0.16
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG22	20	0.16
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG23	20	0.16
(1,2135)	1:A:135:ILE:HG21	1:A:137:PHE:H	19	0.16
(1,2135)	1:A:135:ILE:HG22	1:A:137:PHE:H	19	0.16
(1,2135)	1:A:135:ILE:HG23	1:A:137:PHE:H	19	0.16
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	7	0.16
(1,1312)	1:A:55:PHE:HD1	1:A:62:GLU:H	8	0.16
(1,1312)	1:A:55:PHE:HD2	1:A:62:GLU:H	8	0.16
(1,1312)	1:A:55:PHE:HD1	1:A:62:GLU:H	13	0.16
(1,1312)	1:A:55:PHE:HD2	1:A:62:GLU:H	13	0.16
(1,1304)	1:A:16:ASN:HA	1:A:17:PHE:HD1	16	0.16
(1,1304)	1:A:16:ASN:HA	1:A:17:PHE:HD2	16	0.16
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB1	17	0.15
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB2	17	0.15
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB3	17	0.15
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB1	17	0.15
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB2	17	0.15
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB3	17	0.15
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB1	17	0.15
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB2	17	0.15
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB3	17	0.15
(1,761)	1:A:110:LEU:HA	1:A:114:PHE:H	8	0.15
(1,687)	1:A:102:PRO:HA	1:A:158:ARG:HD3	14	0.15
(1,629)	1:A:97:LEU:HG	1:A:163:TYR:HD1	16	0.15
(1,629)	1:A:97:LEU:HG	1:A:163:TYR:HD2	16	0.15
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	9	0.15
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	9	0.15
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	9	0.15
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	17	0.15
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	17	0.15
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	17	0.15
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	20	0.15
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	20	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	20	0.15
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	1	0.15
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	18	0.15
(1,3092)	1:A:107:GLN:HB2	1:A:122:LEU:HG	19	0.15
(1,3092)	1:A:107:GLN:HB3	1:A:122:LEU:HG	19	0.15
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	5	0.15
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	5	0.15
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	9	0.15
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	9	0.15
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	16	0.15
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	16	0.15
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	2	0.15
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	2	0.15
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	2	0.15
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	2	0.15
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	2	0.15
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	2	0.15
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	16	0.15
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	16	0.15
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	16	0.15
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	16	0.15
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	16	0.15
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	16	0.15
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	2	0.15
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	2	0.15
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	2	0.15
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	2	0.15
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	2	0.15
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	2	0.15
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	4	0.15
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	4	0.15
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	4	0.15
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	4	0.15
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	4	0.15
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	4	0.15
(1,2128)	1:A:95:THR:HB	1:A:137:PHE:H	18	0.15
(1,2128)	1:A:95:THR:HB	1:A:137:PHE:H	19	0.15
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD11	6	0.15
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD12	6	0.15
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD13	6	0.15
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	1	0.15
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	2	0.15

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	18	0.15
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD11	11	0.15
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD12	11	0.15
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD13	11	0.15
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	4	0.15
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	5	0.15
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	7	0.15
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	7	0.15
(1,1178)	1:A:171:GLU:H	1:A:171:GLU:HG3	11	0.15
(1,1108)	1:A:158:ARG:HD2	1:A:159:SER:H	14	0.15
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB1	20	0.14
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB2	20	0.14
(1,878)	1:A:122:LEU:HD21	1:A:133:ALA:HB3	20	0.14
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB1	20	0.14
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB2	20	0.14
(1,878)	1:A:122:LEU:HD22	1:A:133:ALA:HB3	20	0.14
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB1	20	0.14
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB2	20	0.14
(1,878)	1:A:122:LEU:HD23	1:A:133:ALA:HB3	20	0.14
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	9	0.14
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	9	0.14
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	9	0.14
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	15	0.14
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	15	0.14
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	15	0.14
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	14	0.14
(1,837)	1:A:114:PHE:HZ	1:A:120:ILE:HB	1	0.14
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG21	12	0.14
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG22	12	0.14
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG23	12	0.14
(1,734)	1:A:109:GLU:HA	1:A:111:LYS:H	17	0.14
(1,724)	1:A:107:GLN:HA	1:A:120:ILE:HG21	14	0.14
(1,724)	1:A:107:GLN:HA	1:A:120:ILE:HG22	14	0.14
(1,724)	1:A:107:GLN:HA	1:A:120:ILE:HG23	14	0.14
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	4	0.14
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	4	0.14
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	4	0.14
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	1	0.14
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	1	0.14
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	1	0.14
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	19	0.14
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	19	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	19	0.14
(1,3439)	1:A:170:GLY:H	1:A:173:LEU:HB2	4	0.14
(1,3439)	1:A:170:GLY:H	1:A:173:LEU:HB3	4	0.14
(1,3439)	1:A:170:GLY:H	1:A:173:LEU:HB2	10	0.14
(1,3439)	1:A:170:GLY:H	1:A:173:LEU:HB3	10	0.14
(1,3308)	1:A:140:GLU:HB2	1:A:141:ALA:H	6	0.14
(1,3308)	1:A:140:GLU:HB3	1:A:141:ALA:H	6	0.14
(1,3276)	1:A:129:SER:HB2	1:A:130:LYS:H	18	0.14
(1,3276)	1:A:129:SER:HB3	1:A:130:LYS:H	18	0.14
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	5	0.14
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	9	0.14
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	11	0.14
(1,3109)	1:A:109:GLU:H	1:A:109:GLU:HG2	7	0.14
(1,3109)	1:A:109:GLU:H	1:A:109:GLU:HG3	7	0.14
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	2	0.14
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	2	0.14
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG21	16	0.14
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG22	16	0.14
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG23	16	0.14
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG21	16	0.14
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG22	16	0.14
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG23	16	0.14
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG21	16	0.14
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG22	16	0.14
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG23	16	0.14
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG21	16	0.14
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG22	16	0.14
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG23	16	0.14
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG21	16	0.14
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG22	16	0.14
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG23	16	0.14
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG21	16	0.14
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG22	16	0.14
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG23	16	0.14
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG11	14	0.14
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG12	14	0.14
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG13	14	0.14
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG21	14	0.14
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG22	14	0.14
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG23	14	0.14
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	18	0.14
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	18	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	18	0.14
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	18	0.14
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	18	0.14
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	18	0.14
(1,2561)	1:A:24:LEU:HD11	1:A:72:VAL:HG11	13	0.14
(1,2561)	1:A:24:LEU:HD11	1:A:72:VAL:HG12	13	0.14
(1,2561)	1:A:24:LEU:HD11	1:A:72:VAL:HG13	13	0.14
(1,2561)	1:A:24:LEU:HD11	1:A:72:VAL:HG21	13	0.14
(1,2561)	1:A:24:LEU:HD11	1:A:72:VAL:HG22	13	0.14
(1,2561)	1:A:24:LEU:HD11	1:A:72:VAL:HG23	13	0.14
(1,2561)	1:A:24:LEU:HD12	1:A:72:VAL:HG11	13	0.14
(1,2561)	1:A:24:LEU:HD12	1:A:72:VAL:HG12	13	0.14
(1,2561)	1:A:24:LEU:HD12	1:A:72:VAL:HG13	13	0.14
(1,2561)	1:A:24:LEU:HD12	1:A:72:VAL:HG21	13	0.14
(1,2561)	1:A:24:LEU:HD12	1:A:72:VAL:HG22	13	0.14
(1,2561)	1:A:24:LEU:HD12	1:A:72:VAL:HG23	13	0.14
(1,2561)	1:A:24:LEU:HD13	1:A:72:VAL:HG11	13	0.14
(1,2561)	1:A:24:LEU:HD13	1:A:72:VAL:HG12	13	0.14
(1,2561)	1:A:24:LEU:HD13	1:A:72:VAL:HG13	13	0.14
(1,2561)	1:A:24:LEU:HD13	1:A:72:VAL:HG21	13	0.14
(1,2561)	1:A:24:LEU:HD13	1:A:72:VAL:HG22	13	0.14
(1,2561)	1:A:24:LEU:HD13	1:A:72:VAL:HG23	13	0.14
(1,2561)	1:A:24:LEU:HD21	1:A:72:VAL:HG11	13	0.14
(1,2561)	1:A:24:LEU:HD21	1:A:72:VAL:HG12	13	0.14
(1,2561)	1:A:24:LEU:HD21	1:A:72:VAL:HG13	13	0.14
(1,2561)	1:A:24:LEU:HD21	1:A:72:VAL:HG21	13	0.14
(1,2561)	1:A:24:LEU:HD21	1:A:72:VAL:HG22	13	0.14
(1,2561)	1:A:24:LEU:HD21	1:A:72:VAL:HG23	13	0.14
(1,2561)	1:A:24:LEU:HD22	1:A:72:VAL:HG11	13	0.14
(1,2561)	1:A:24:LEU:HD22	1:A:72:VAL:HG12	13	0.14
(1,2561)	1:A:24:LEU:HD22	1:A:72:VAL:HG13	13	0.14
(1,2561)	1:A:24:LEU:HD22	1:A:72:VAL:HG21	13	0.14
(1,2561)	1:A:24:LEU:HD22	1:A:72:VAL:HG22	13	0.14
(1,2561)	1:A:24:LEU:HD22	1:A:72:VAL:HG23	13	0.14
(1,2561)	1:A:24:LEU:HD23	1:A:72:VAL:HG11	13	0.14
(1,2561)	1:A:24:LEU:HD23	1:A:72:VAL:HG12	13	0.14
(1,2561)	1:A:24:LEU:HD23	1:A:72:VAL:HG13	13	0.14
(1,2561)	1:A:24:LEU:HD23	1:A:72:VAL:HG21	13	0.14
(1,2561)	1:A:24:LEU:HD23	1:A:72:VAL:HG22	13	0.14
(1,2561)	1:A:24:LEU:HD23	1:A:72:VAL:HG23	13	0.14
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD11	10	0.14
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD12	10	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD13	10	0.14
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD21	10	0.14
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD22	10	0.14
(1,2531)	1:A:21:ALA:H	1:A:24:LEU:HD23	10	0.14
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	9	0.14
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	9	0.14
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	9	0.14
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	9	0.14
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	9	0.14
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	9	0.14
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	10	0.14
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	10	0.14
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	10	0.14
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	10	0.14
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	10	0.14
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	10	0.14
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	14	0.14
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	14	0.14
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	14	0.14
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	14	0.14
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	14	0.14
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	14	0.14
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	7	0.14
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	7	0.14
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	7	0.14
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	7	0.14
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	7	0.14
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	7	0.14
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	11	0.14
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	11	0.14
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	11	0.14
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	11	0.14
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	11	0.14
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	11	0.14
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	14	0.14
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	14	0.14
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	14	0.14
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	14	0.14
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	14	0.14
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	14	0.14
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	19	0.14
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	19	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	19	0.14
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	19	0.14
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	19	0.14
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	19	0.14
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	5	0.14
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	5	0.14
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	5	0.14
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	5	0.14
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	5	0.14
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	5	0.14
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	6	0.14
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	6	0.14
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	6	0.14
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	6	0.14
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	6	0.14
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	6	0.14
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	17	0.14
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	17	0.14
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	17	0.14
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	17	0.14
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	17	0.14
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	17	0.14
(1,2437)	1:A:12:VAL:HG11	1:A:50:PHE:HD1	14	0.14
(1,2437)	1:A:12:VAL:HG11	1:A:50:PHE:HD2	14	0.14
(1,2437)	1:A:12:VAL:HG12	1:A:50:PHE:HD1	14	0.14
(1,2437)	1:A:12:VAL:HG12	1:A:50:PHE:HD2	14	0.14
(1,2437)	1:A:12:VAL:HG13	1:A:50:PHE:HD1	14	0.14
(1,2437)	1:A:12:VAL:HG13	1:A:50:PHE:HD2	14	0.14
(1,2437)	1:A:12:VAL:HG21	1:A:50:PHE:HD1	14	0.14
(1,2437)	1:A:12:VAL:HG21	1:A:50:PHE:HD2	14	0.14
(1,2437)	1:A:12:VAL:HG22	1:A:50:PHE:HD1	14	0.14
(1,2437)	1:A:12:VAL:HG22	1:A:50:PHE:HD2	14	0.14
(1,2437)	1:A:12:VAL:HG23	1:A:50:PHE:HD1	14	0.14
(1,2437)	1:A:12:VAL:HG23	1:A:50:PHE:HD2	14	0.14
(1,2437)	1:A:12:VAL:HG11	1:A:50:PHE:HD1	20	0.14
(1,2437)	1:A:12:VAL:HG11	1:A:50:PHE:HD2	20	0.14
(1,2437)	1:A:12:VAL:HG12	1:A:50:PHE:HD1	20	0.14
(1,2437)	1:A:12:VAL:HG12	1:A:50:PHE:HD2	20	0.14
(1,2437)	1:A:12:VAL:HG13	1:A:50:PHE:HD1	20	0.14
(1,2437)	1:A:12:VAL:HG13	1:A:50:PHE:HD2	20	0.14
(1,2437)	1:A:12:VAL:HG21	1:A:50:PHE:HD1	20	0.14
(1,2437)	1:A:12:VAL:HG21	1:A:50:PHE:HD2	20	0.14

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2437)	1:A:12:VAL:HG22	1:A:50:PHE:HD1	20	0.14
(1,2437)	1:A:12:VAL:HG22	1:A:50:PHE:HD2	20	0.14
(1,2437)	1:A:12:VAL:HG23	1:A:50:PHE:HD1	20	0.14
(1,2437)	1:A:12:VAL:HG23	1:A:50:PHE:HD2	20	0.14
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG21	19	0.14
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG22	19	0.14
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG23	19	0.14
(1,2207)	1:A:113:VAL:HB	1:A:151:GLN:H	8	0.14
(1,2169)	1:A:96:LEU:HG	1:A:143:ALA:H	19	0.14
(1,2135)	1:A:135:ILE:HG21	1:A:137:PHE:H	15	0.14
(1,2135)	1:A:135:ILE:HG22	1:A:137:PHE:H	15	0.14
(1,2135)	1:A:135:ILE:HG23	1:A:137:PHE:H	15	0.14
(1,1875)	1:A:77:ILE:HD11	1:A:80:GLU:H	5	0.14
(1,1875)	1:A:77:ILE:HD12	1:A:80:GLU:H	5	0.14
(1,1875)	1:A:77:ILE:HD13	1:A:80:GLU:H	5	0.14
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	12	0.14
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	20	0.14
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	12	0.14
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	12	0.14
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	13	0.14
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	13	0.14
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	4	0.14
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	4	0.14
(1,875)	1:A:122:LEU:HD21	1:A:133:ALA:HA	14	0.13
(1,875)	1:A:122:LEU:HD22	1:A:133:ALA:HA	14	0.13
(1,875)	1:A:122:LEU:HD23	1:A:133:ALA:HA	14	0.13
(1,761)	1:A:110:LEU:HA	1:A:114:PHE:H	9	0.13
(1,761)	1:A:110:LEU:HA	1:A:114:PHE:H	10	0.13
(1,687)	1:A:102:PRO:HA	1:A:158:ARG:HD3	20	0.13
(1,65)	1:A:12:VAL:HG11	1:A:51:GLY:H	4	0.13
(1,65)	1:A:12:VAL:HG12	1:A:51:GLY:H	4	0.13
(1,65)	1:A:12:VAL:HG13	1:A:51:GLY:H	4	0.13
(1,629)	1:A:97:LEU:HG	1:A:163:TYR:HD1	19	0.13
(1,629)	1:A:97:LEU:HG	1:A:163:TYR:HD2	19	0.13
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	16	0.13
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	16	0.13
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	16	0.13
(1,388)	1:A:61:LEU:HA	1:A:61:LEU:HD21	16	0.13
(1,388)	1:A:61:LEU:HA	1:A:61:LEU:HD22	16	0.13
(1,388)	1:A:61:LEU:HA	1:A:61:LEU:HD23	16	0.13
(1,3447)	1:A:171:GLU:H	1:A:171:GLU:HG2	11	0.13
(1,3447)	1:A:171:GLU:H	1:A:171:GLU:HG3	11	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3308)	1:A:140:GLU:HB2	1:A:141:ALA:H	18	0.13
(1,3308)	1:A:140:GLU:HB3	1:A:141:ALA:H	18	0.13
(1,3281)	1:A:130:LYS:HA	1:A:130:LYS:HD2	4	0.13
(1,3281)	1:A:130:LYS:HA	1:A:130:LYS:HD3	4	0.13
(1,3281)	1:A:130:LYS:HA	1:A:130:LYS:HD2	5	0.13
(1,3281)	1:A:130:LYS:HA	1:A:130:LYS:HD3	5	0.13
(1,3170)	1:A:114:PHE:HD1	1:A:162:LEU:HD11	8	0.13
(1,3170)	1:A:114:PHE:HD1	1:A:162:LEU:HD12	8	0.13
(1,3170)	1:A:114:PHE:HD1	1:A:162:LEU:HD13	8	0.13
(1,3170)	1:A:114:PHE:HD1	1:A:162:LEU:HD21	8	0.13
(1,3170)	1:A:114:PHE:HD1	1:A:162:LEU:HD22	8	0.13
(1,3170)	1:A:114:PHE:HD1	1:A:162:LEU:HD23	8	0.13
(1,3170)	1:A:114:PHE:HD2	1:A:162:LEU:HD11	8	0.13
(1,3170)	1:A:114:PHE:HD2	1:A:162:LEU:HD12	8	0.13
(1,3170)	1:A:114:PHE:HD2	1:A:162:LEU:HD13	8	0.13
(1,3170)	1:A:114:PHE:HD2	1:A:162:LEU:HD21	8	0.13
(1,3170)	1:A:114:PHE:HD2	1:A:162:LEU:HD22	8	0.13
(1,3170)	1:A:114:PHE:HD2	1:A:162:LEU:HD23	8	0.13
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG2	14	0.13
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG3	14	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG11	9	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG12	9	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG13	9	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG21	9	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG22	9	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG23	9	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG11	10	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG12	10	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG13	10	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG21	10	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG22	10	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG23	10	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG11	11	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG12	11	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG13	11	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG21	11	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG22	11	0.13
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG23	11	0.13
(1,3109)	1:A:109:GLU:H	1:A:109:GLU:HG2	4	0.13
(1,3109)	1:A:109:GLU:H	1:A:109:GLU:HG3	4	0.13
(1,3092)	1:A:107:GLN:HB2	1:A:122:LEU:HG	2	0.13
(1,3092)	1:A:107:GLN:HB3	1:A:122:LEU:HG	2	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	3	0.13
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	3	0.13
(1,3018)	1:A:101:LEU:HD11	1:A:122:LEU:HG	1	0.13
(1,3018)	1:A:101:LEU:HD12	1:A:122:LEU:HG	1	0.13
(1,3018)	1:A:101:LEU:HD13	1:A:122:LEU:HG	1	0.13
(1,3018)	1:A:101:LEU:HD21	1:A:122:LEU:HG	1	0.13
(1,3018)	1:A:101:LEU:HD22	1:A:122:LEU:HG	1	0.13
(1,3018)	1:A:101:LEU:HD23	1:A:122:LEU:HG	1	0.13
(1,3018)	1:A:101:LEU:HD11	1:A:122:LEU:HG	4	0.13
(1,3018)	1:A:101:LEU:HD12	1:A:122:LEU:HG	4	0.13
(1,3018)	1:A:101:LEU:HD13	1:A:122:LEU:HG	4	0.13
(1,3018)	1:A:101:LEU:HD21	1:A:122:LEU:HG	4	0.13
(1,3018)	1:A:101:LEU:HD22	1:A:122:LEU:HG	4	0.13
(1,3018)	1:A:101:LEU:HD23	1:A:122:LEU:HG	4	0.13
(1,3018)	1:A:101:LEU:HD11	1:A:122:LEU:HG	6	0.13
(1,3018)	1:A:101:LEU:HD12	1:A:122:LEU:HG	6	0.13
(1,3018)	1:A:101:LEU:HD13	1:A:122:LEU:HG	6	0.13
(1,3018)	1:A:101:LEU:HD21	1:A:122:LEU:HG	6	0.13
(1,3018)	1:A:101:LEU:HD22	1:A:122:LEU:HG	6	0.13
(1,3018)	1:A:101:LEU:HD23	1:A:122:LEU:HG	6	0.13
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG21	19	0.13
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG22	19	0.13
(1,2982)	1:A:97:LEU:HD11	1:A:165:THR:HG23	19	0.13
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG21	19	0.13
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG22	19	0.13
(1,2982)	1:A:97:LEU:HD12	1:A:165:THR:HG23	19	0.13
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG21	19	0.13
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG22	19	0.13
(1,2982)	1:A:97:LEU:HD13	1:A:165:THR:HG23	19	0.13
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG21	19	0.13
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG22	19	0.13
(1,2982)	1:A:97:LEU:HD21	1:A:165:THR:HG23	19	0.13
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG21	19	0.13
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG22	19	0.13
(1,2982)	1:A:97:LEU:HD22	1:A:165:THR:HG23	19	0.13
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG21	19	0.13
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG22	19	0.13
(1,2982)	1:A:97:LEU:HD23	1:A:165:THR:HG23	19	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG11	3	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG12	3	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG13	3	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG21	3	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG22	3	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG23	3	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG11	11	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG12	11	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG13	11	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG21	11	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG22	11	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG23	11	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG11	18	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG12	18	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG13	18	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG21	18	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG22	18	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG23	18	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG11	20	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG12	20	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG13	20	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG21	20	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG22	20	0.13
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG23	20	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	1	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	1	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	1	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	1	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	1	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	1	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	7	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	7	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	7	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	7	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	7	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	7	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	11	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	11	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	11	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	11	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	11	0.13
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	11	0.13
(1,2483)	1:A:15:LEU:HD11	1:A:49:LYS:HA	14	0.13
(1,2483)	1:A:15:LEU:HD12	1:A:49:LYS:HA	14	0.13
(1,2483)	1:A:15:LEU:HD13	1:A:49:LYS:HA	14	0.13
(1,2483)	1:A:15:LEU:HD21	1:A:49:LYS:HA	14	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2483)	1:A:15:LEU:HD22	1:A:49:LYS:HA	14	0.13
(1,2483)	1:A:15:LEU:HD23	1:A:49:LYS:HA	14	0.13
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	1	0.13
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	1	0.13
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	1	0.13
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	1	0.13
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	1	0.13
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	1	0.13
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	6	0.13
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	6	0.13
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	6	0.13
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	6	0.13
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	6	0.13
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	6	0.13
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	7	0.13
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	7	0.13
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	7	0.13
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	7	0.13
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	7	0.13
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	7	0.13
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	8	0.13
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	8	0.13
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	8	0.13
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	8	0.13
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	8	0.13
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	8	0.13
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	11	0.13
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	11	0.13
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	11	0.13
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	11	0.13
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	11	0.13
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	11	0.13
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	20	0.13
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	20	0.13
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	20	0.13
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	20	0.13
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	20	0.13
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	20	0.13
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	3	0.13
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	3	0.13
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	3	0.13
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	3	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	3	0.13
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	3	0.13
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	8	0.13
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	8	0.13
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	8	0.13
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	8	0.13
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	8	0.13
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	8	0.13
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	10	0.13
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	10	0.13
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	10	0.13
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	10	0.13
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	10	0.13
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	10	0.13
(1,2137)	1:A:138:LYS:H	1:A:142:ASP:H	1	0.13
(1,2137)	1:A:138:LYS:H	1:A:142:ASP:H	18	0.13
(1,2128)	1:A:95:THR:HB	1:A:137:PHE:H	1	0.13
(1,2101)	1:A:123:VAL:HB	1:A:132:ILE:H	17	0.13
(1,1875)	1:A:77:ILE:HD11	1:A:80:GLU:H	16	0.13
(1,1875)	1:A:77:ILE:HD12	1:A:80:GLU:H	16	0.13
(1,1875)	1:A:77:ILE:HD13	1:A:80:GLU:H	16	0.13
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	3	0.13
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	9	0.13
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	14	0.13
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	16	0.13
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	19	0.13
(1,169)	1:A:30:ASP:HA	1:A:34:LYS:H	18	0.13
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD11	14	0.13
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD12	14	0.13
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD13	14	0.13
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	5	0.13
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	5	0.13
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	6	0.13
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	6	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	1	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	1	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	2	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	2	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	3	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	3	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	4	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	4	0.13

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	7	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	7	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	9	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	9	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	10	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	10	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	11	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	11	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	16	0.13
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	16	0.13
(1,1330)	1:A:114:PHE:HD1	1:A:135:ILE:HD11	18	0.13
(1,1330)	1:A:114:PHE:HD1	1:A:135:ILE:HD12	18	0.13
(1,1330)	1:A:114:PHE:HD1	1:A:135:ILE:HD13	18	0.13
(1,1330)	1:A:114:PHE:HD2	1:A:135:ILE:HD11	18	0.13
(1,1330)	1:A:114:PHE:HD2	1:A:135:ILE:HD12	18	0.13
(1,1330)	1:A:114:PHE:HD2	1:A:135:ILE:HD13	18	0.13
(1,877)	1:A:107:GLN:HA	1:A:122:LEU:HD21	14	0.12
(1,877)	1:A:107:GLN:HA	1:A:122:LEU:HD22	14	0.12
(1,877)	1:A:107:GLN:HA	1:A:122:LEU:HD23	14	0.12
(1,837)	1:A:114:PHE:HZ	1:A:120:ILE:HB	4	0.12
(1,761)	1:A:110:LEU:HA	1:A:114:PHE:H	1	0.12
(1,761)	1:A:110:LEU:HA	1:A:114:PHE:H	11	0.12
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	14	0.12
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	14	0.12
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	14	0.12
(1,551)	1:A:79:LEU:H	1:A:79:LEU:HG	12	0.12
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	2	0.12
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	2	0.12
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	2	0.12
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	4	0.12
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	4	0.12
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	4	0.12
(1,450)	1:A:67:LEU:HD21	1:A:68:THR:H	4	0.12
(1,450)	1:A:67:LEU:HD22	1:A:68:THR:H	4	0.12
(1,450)	1:A:67:LEU:HD23	1:A:68:THR:H	4	0.12
(1,42)	1:A:9:ASN:HB3	1:A:53:VAL:HB	14	0.12
(1,3338)	1:A:146:THR:H	1:A:149:GLU:HB2	1	0.12
(1,3338)	1:A:146:THR:H	1:A:149:GLU:HB3	1	0.12
(1,319)	1:A:12:VAL:HB	1:A:52:TYR:HA	19	0.12
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG11	6	0.12
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG12	6	0.12
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG13	6	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG21	6	0.12
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG22	6	0.12
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG23	6	0.12
(1,3120)	1:A:109:GLU:HG2	1:A:155:ILE:HB	12	0.12
(1,3120)	1:A:109:GLU:HG3	1:A:155:ILE:HB	12	0.12
(1,3092)	1:A:107:GLN:HB2	1:A:122:LEU:HG	16	0.12
(1,3092)	1:A:107:GLN:HB3	1:A:122:LEU:HG	16	0.12
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	12	0.12
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	12	0.12
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG2	18	0.12
(1,3078)	1:A:107:GLN:H	1:A:107:GLN:HG3	18	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD11	1	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD12	1	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD13	1	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD21	1	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD22	1	0.12
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD23	1	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD11	1	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD12	1	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD13	1	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD21	1	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD22	1	0.12
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD23	1	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD11	1	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD12	1	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD13	1	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD21	1	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD22	1	0.12
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD23	1	0.12
(1,3018)	1:A:101:LEU:HD11	1:A:122:LEU:HG	13	0.12
(1,3018)	1:A:101:LEU:HD12	1:A:122:LEU:HG	13	0.12
(1,3018)	1:A:101:LEU:HD13	1:A:122:LEU:HG	13	0.12
(1,3018)	1:A:101:LEU:HD21	1:A:122:LEU:HG	13	0.12
(1,3018)	1:A:101:LEU:HD22	1:A:122:LEU:HG	13	0.12
(1,3018)	1:A:101:LEU:HD23	1:A:122:LEU:HG	13	0.12
(1,300)	1:A:49:LYS:HB3	1:A:50:PHE:HE1	15	0.12
(1,300)	1:A:49:LYS:HB3	1:A:50:PHE:HE2	15	0.12
(1,2926)	1:A:93:ALA:HB1	1:A:140:GLU:HG2	18	0.12
(1,2926)	1:A:93:ALA:HB1	1:A:140:GLU:HG3	18	0.12
(1,2926)	1:A:93:ALA:HB2	1:A:140:GLU:HG2	18	0.12
(1,2926)	1:A:93:ALA:HB2	1:A:140:GLU:HG3	18	0.12
(1,2926)	1:A:93:ALA:HB3	1:A:140:GLU:HG2	18	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2926)	1:A:93:ALA:HB3	1:A:140:GLU:HG3	18	0.12
(1,2918)	1:A:89:LYS:HG2	1:A:90:GLU:H	16	0.12
(1,2918)	1:A:89:LYS:HG3	1:A:90:GLU:H	16	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD11	5	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD12	5	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD13	5	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD21	5	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD22	5	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD23	5	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD11	17	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD12	17	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD13	17	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD21	17	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD22	17	0.12
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD23	17	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG11	10	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG12	10	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG13	10	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG21	10	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG22	10	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG23	10	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG11	17	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG12	17	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG13	17	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG21	17	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG22	17	0.12
(1,2585)	1:A:28:ILE:H	1:A:53:VAL:HG23	17	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	3	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	3	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	3	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	3	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	3	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	3	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	9	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	9	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	9	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	9	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	9	0.12
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	9	0.12
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	13	0.12
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	13	0.12
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	13	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	13	0.12
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	13	0.12
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	13	0.12
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	15	0.12
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	15	0.12
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	15	0.12
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	15	0.12
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	15	0.12
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	15	0.12
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	12	0.12
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	12	0.12
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	12	0.12
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	12	0.12
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	12	0.12
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	12	0.12
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	20	0.12
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	20	0.12
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	20	0.12
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	20	0.12
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	20	0.12
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	20	0.12
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	4	0.12
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	4	0.12
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	4	0.12
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	4	0.12
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	4	0.12
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	4	0.12
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	7	0.12
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	7	0.12
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	7	0.12
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	7	0.12
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	7	0.12
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	7	0.12
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	18	0.12
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	18	0.12
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	18	0.12
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	18	0.12
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	18	0.12
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	18	0.12
(1,2437)	1:A:12:VAL:HG11	1:A:50:PHE:HD1	19	0.12
(1,2437)	1:A:12:VAL:HG11	1:A:50:PHE:HD2	19	0.12
(1,2437)	1:A:12:VAL:HG12	1:A:50:PHE:HD1	19	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2437)	1:A:12:VAL:HG12	1:A:50:PHE:HD2	19	0.12
(1,2437)	1:A:12:VAL:HG13	1:A:50:PHE:HD1	19	0.12
(1,2437)	1:A:12:VAL:HG13	1:A:50:PHE:HD2	19	0.12
(1,2437)	1:A:12:VAL:HG21	1:A:50:PHE:HD1	19	0.12
(1,2437)	1:A:12:VAL:HG21	1:A:50:PHE:HD2	19	0.12
(1,2437)	1:A:12:VAL:HG22	1:A:50:PHE:HD1	19	0.12
(1,2437)	1:A:12:VAL:HG22	1:A:50:PHE:HD2	19	0.12
(1,2437)	1:A:12:VAL:HG23	1:A:50:PHE:HD1	19	0.12
(1,2437)	1:A:12:VAL:HG23	1:A:50:PHE:HD2	19	0.12
(1,2260)	1:A:155:ILE:HB	1:A:160:ILE:H	20	0.12
(1,2169)	1:A:96:LEU:HG	1:A:143:ALA:H	14	0.12
(1,2169)	1:A:96:LEU:HG	1:A:143:ALA:H	20	0.12
(1,2135)	1:A:135:ILE:HG21	1:A:137:PHE:H	7	0.12
(1,2135)	1:A:135:ILE:HG22	1:A:137:PHE:H	7	0.12
(1,2135)	1:A:135:ILE:HG23	1:A:137:PHE:H	7	0.12
(1,2129)	1:A:135:ILE:HA	1:A:137:PHE:H	19	0.12
(1,2128)	1:A:95:THR:HB	1:A:137:PHE:H	12	0.12
(1,2085)	1:A:129:SER:H	1:A:131:GLY:H	8	0.12
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD11	11	0.12
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD12	11	0.12
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD13	11	0.12
(1,1945)	1:A:97:LEU:HG	1:A:98:ALA:H	19	0.12
(1,1875)	1:A:77:ILE:HD11	1:A:80:GLU:H	12	0.12
(1,1875)	1:A:77:ILE:HD12	1:A:80:GLU:H	12	0.12
(1,1875)	1:A:77:ILE:HD13	1:A:80:GLU:H	12	0.12
(1,1693)	1:A:12:VAL:HB	1:A:51:GLY:H	6	0.12
(1,1382)	1:A:114:PHE:HD1	1:A:115:GLU:H	8	0.12
(1,1382)	1:A:114:PHE:HD2	1:A:115:GLU:H	8	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	5	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	5	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	6	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	6	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	8	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	8	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	12	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	12	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	13	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	13	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	14	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	14	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	15	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	15	0.12

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	17	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	17	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE1	20	0.12
(1,1332)	1:A:114:PHE:HA	1:A:114:PHE:HE2	20	0.12
(1,1312)	1:A:55:PHE:HD1	1:A:62:GLU:H	6	0.12
(1,1312)	1:A:55:PHE:HD2	1:A:62:GLU:H	6	0.12
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	1	0.12
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	1	0.12
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	3	0.12
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	3	0.12
(1,1219)	1:A:103:TYR:HD1	1:A:131:GLY:H	18	0.12
(1,1219)	1:A:103:TYR:HD2	1:A:131:GLY:H	18	0.12
(1,1169)	1:A:173:LEU:HA	1:A:173:LEU:HG	19	0.12
(1,869)	1:A:106:THR:H	1:A:122:LEU:HD11	17	0.11
(1,869)	1:A:106:THR:H	1:A:122:LEU:HD12	17	0.11
(1,869)	1:A:106:THR:H	1:A:122:LEU:HD13	17	0.11
(1,866)	1:A:122:LEU:HG	1:A:123:VAL:H	7	0.11
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	15	0.11
(1,861)	1:A:107:GLN:H	1:A:122:LEU:HG	20	0.11
(1,837)	1:A:114:PHE:HZ	1:A:120:ILE:HB	10	0.11
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG21	20	0.11
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG22	20	0.11
(1,821)	1:A:119:GLU:HB2	1:A:135:ILE:HG23	20	0.11
(1,761)	1:A:110:LEU:HA	1:A:114:PHE:H	6	0.11
(1,734)	1:A:109:GLU:HA	1:A:111:LYS:H	15	0.11
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	5	0.11
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	5	0.11
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	5	0.11
(1,67)	1:A:12:VAL:HG21	1:A:32:PHE:HZ	18	0.11
(1,67)	1:A:12:VAL:HG22	1:A:32:PHE:HZ	18	0.11
(1,67)	1:A:12:VAL:HG23	1:A:32:PHE:HZ	18	0.11
(1,62)	1:A:12:VAL:HA	1:A:79:LEU:HG	18	0.11
(1,593)	1:A:91:ARG:HA	1:A:93:ALA:HB1	18	0.11
(1,593)	1:A:91:ARG:HA	1:A:93:ALA:HB2	18	0.11
(1,593)	1:A:91:ARG:HA	1:A:93:ALA:HB3	18	0.11
(1,533)	1:A:77:ILE:HD11	1:A:79:LEU:HG	14	0.11
(1,533)	1:A:77:ILE:HD12	1:A:79:LEU:HG	14	0.11
(1,533)	1:A:77:ILE:HD13	1:A:79:LEU:HG	14	0.11
(1,513)	1:A:76:GLU:HB3	1:A:77:ILE:HG21	2	0.11
(1,513)	1:A:76:GLU:HB3	1:A:77:ILE:HG22	2	0.11
(1,513)	1:A:76:GLU:HB3	1:A:77:ILE:HG23	2	0.11
(1,450)	1:A:67:LEU:HD21	1:A:68:THR:H	7	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,450)	1:A:67:LEU:HD22	1:A:68:THR:H	7	0.11
(1,450)	1:A:67:LEU:HD23	1:A:68:THR:H	7	0.11
(1,42)	1:A:9:ASN:HB3	1:A:53:VAL:HB	3	0.11
(1,42)	1:A:9:ASN:HB3	1:A:53:VAL:HB	8	0.11
(1,42)	1:A:9:ASN:HB3	1:A:53:VAL:HB	15	0.11
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD11	18	0.11
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD12	18	0.11
(1,395)	1:A:61:LEU:HA	1:A:61:LEU:HD13	18	0.11
(1,3357)	1:A:149:GLU:HG2	1:A:150:LYS:H	4	0.11
(1,3357)	1:A:149:GLU:HG3	1:A:150:LYS:H	4	0.11
(1,3357)	1:A:149:GLU:HG2	1:A:150:LYS:H	13	0.11
(1,3357)	1:A:149:GLU:HG3	1:A:150:LYS:H	13	0.11
(1,3326)	1:A:144:GLU:HG2	1:A:164:TYR:HE1	3	0.11
(1,3326)	1:A:144:GLU:HG2	1:A:164:TYR:HE2	3	0.11
(1,3326)	1:A:144:GLU:HG3	1:A:164:TYR:HE1	3	0.11
(1,3326)	1:A:144:GLU:HG3	1:A:164:TYR:HE2	3	0.11
(1,3326)	1:A:144:GLU:HG2	1:A:164:TYR:HE1	16	0.11
(1,3326)	1:A:144:GLU:HG2	1:A:164:TYR:HE2	16	0.11
(1,3326)	1:A:144:GLU:HG3	1:A:164:TYR:HE1	16	0.11
(1,3326)	1:A:144:GLU:HG3	1:A:164:TYR:HE2	16	0.11
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG2	2	0.11
(1,3169)	1:A:114:PHE:HA	1:A:115:GLU:HG3	2	0.11
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG11	3	0.11
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG12	3	0.11
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG13	3	0.11
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG21	3	0.11
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG22	3	0.11
(1,3122)	1:A:110:LEU:H	1:A:113:VAL:HG23	3	0.11
(1,3120)	1:A:109:GLU:HG2	1:A:155:ILE:HB	5	0.11
(1,3120)	1:A:109:GLU:HG3	1:A:155:ILE:HB	5	0.11
(1,3092)	1:A:107:GLN:HB2	1:A:122:LEU:HG	3	0.11
(1,3092)	1:A:107:GLN:HB3	1:A:122:LEU:HG	3	0.11
(1,3092)	1:A:107:GLN:HB2	1:A:122:LEU:HG	9	0.11
(1,3092)	1:A:107:GLN:HB3	1:A:122:LEU:HG	9	0.11
(1,3092)	1:A:107:GLN:HB2	1:A:122:LEU:HG	18	0.11
(1,3092)	1:A:107:GLN:HB3	1:A:122:LEU:HG	18	0.11
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD11	10	0.11
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD12	10	0.11
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD13	10	0.11
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD21	10	0.11
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD22	10	0.11
(1,3076)	1:A:106:THR:HG21	1:A:122:LEU:HD23	10	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD11	10	0.11
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD12	10	0.11
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD13	10	0.11
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD21	10	0.11
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD22	10	0.11
(1,3076)	1:A:106:THR:HG22	1:A:122:LEU:HD23	10	0.11
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD11	10	0.11
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD12	10	0.11
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD13	10	0.11
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD21	10	0.11
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD22	10	0.11
(1,3076)	1:A:106:THR:HG23	1:A:122:LEU:HD23	10	0.11
(1,3059)	1:A:105:VAL:HG11	1:A:109:GLU:HA	12	0.11
(1,3059)	1:A:105:VAL:HG12	1:A:109:GLU:HA	12	0.11
(1,3059)	1:A:105:VAL:HG13	1:A:109:GLU:HA	12	0.11
(1,3059)	1:A:105:VAL:HG21	1:A:109:GLU:HA	12	0.11
(1,3059)	1:A:105:VAL:HG22	1:A:109:GLU:HA	12	0.11
(1,3059)	1:A:105:VAL:HG23	1:A:109:GLU:HA	12	0.11
(1,2976)	1:A:97:LEU:HD11	1:A:162:LEU:HA	1	0.11
(1,2976)	1:A:97:LEU:HD12	1:A:162:LEU:HA	1	0.11
(1,2976)	1:A:97:LEU:HD13	1:A:162:LEU:HA	1	0.11
(1,2976)	1:A:97:LEU:HD21	1:A:162:LEU:HA	1	0.11
(1,2976)	1:A:97:LEU:HD22	1:A:162:LEU:HA	1	0.11
(1,2976)	1:A:97:LEU:HD23	1:A:162:LEU:HA	1	0.11
(1,2924)	1:A:92:ASP:HA	1:A:166:GLY:HA2	12	0.11
(1,2924)	1:A:92:ASP:HA	1:A:166:GLY:HA3	12	0.11
(1,2806)	1:A:67:LEU:H	1:A:67:LEU:HD11	8	0.11
(1,2806)	1:A:67:LEU:H	1:A:67:LEU:HD12	8	0.11
(1,2806)	1:A:67:LEU:H	1:A:67:LEU:HD13	8	0.11
(1,2806)	1:A:67:LEU:H	1:A:67:LEU:HD21	8	0.11
(1,2806)	1:A:67:LEU:H	1:A:67:LEU:HD22	8	0.11
(1,2806)	1:A:67:LEU:H	1:A:67:LEU:HD23	8	0.11
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD11	7	0.11
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD12	7	0.11
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD13	7	0.11
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD21	7	0.11
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD22	7	0.11
(1,2804)	1:A:66:GLU:HG2	1:A:67:LEU:HD23	7	0.11
(1,2765)	1:A:61:LEU:HD11	1:A:62:GLU:H	16	0.11
(1,2765)	1:A:61:LEU:HD12	1:A:62:GLU:H	16	0.11
(1,2765)	1:A:61:LEU:HD13	1:A:62:GLU:H	16	0.11
(1,2765)	1:A:61:LEU:HD21	1:A:62:GLU:H	16	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2765)	1:A:61:LEU:HD22	1:A:62:GLU:H	16	0.11
(1,2765)	1:A:61:LEU:HD23	1:A:62:GLU:H	16	0.11
(1,2693)	1:A:42:VAL:HG11	1:A:43:ARG:H	14	0.11
(1,2693)	1:A:42:VAL:HG12	1:A:43:ARG:H	14	0.11
(1,2693)	1:A:42:VAL:HG13	1:A:43:ARG:H	14	0.11
(1,2693)	1:A:42:VAL:HG21	1:A:43:ARG:H	14	0.11
(1,2693)	1:A:42:VAL:HG22	1:A:43:ARG:H	14	0.11
(1,2693)	1:A:42:VAL:HG23	1:A:43:ARG:H	14	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	13	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	13	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	13	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	13	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	13	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	13	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	14	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	14	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	14	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	14	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	14	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	14	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG11	17	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG12	17	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG13	17	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG21	17	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG22	17	0.11
(1,2580)	1:A:27:GLY:H	1:A:72:VAL:HG23	17	0.11
(1,2483)	1:A:15:LEU:HD11	1:A:49:LYS:HA	16	0.11
(1,2483)	1:A:15:LEU:HD12	1:A:49:LYS:HA	16	0.11
(1,2483)	1:A:15:LEU:HD13	1:A:49:LYS:HA	16	0.11
(1,2483)	1:A:15:LEU:HD21	1:A:49:LYS:HA	16	0.11
(1,2483)	1:A:15:LEU:HD22	1:A:49:LYS:HA	16	0.11
(1,2483)	1:A:15:LEU:HD23	1:A:49:LYS:HA	16	0.11
(1,2471)	1:A:15:LEU:HD11	1:A:16:ASN:H	3	0.11
(1,2471)	1:A:15:LEU:HD12	1:A:16:ASN:H	3	0.11
(1,2471)	1:A:15:LEU:HD13	1:A:16:ASN:H	3	0.11
(1,2471)	1:A:15:LEU:HD21	1:A:16:ASN:H	3	0.11
(1,2471)	1:A:15:LEU:HD22	1:A:16:ASN:H	3	0.11
(1,2471)	1:A:15:LEU:HD23	1:A:16:ASN:H	3	0.11
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	1	0.11
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	1	0.11
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	1	0.11
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	1	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	1	0.11
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	1	0.11
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	5	0.11
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	5	0.11
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	5	0.11
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	5	0.11
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	5	0.11
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	5	0.11
(1,2447)	1:A:12:VAL:HG11	1:A:78:LYS:H	9	0.11
(1,2447)	1:A:12:VAL:HG12	1:A:78:LYS:H	9	0.11
(1,2447)	1:A:12:VAL:HG13	1:A:78:LYS:H	9	0.11
(1,2447)	1:A:12:VAL:HG21	1:A:78:LYS:H	9	0.11
(1,2447)	1:A:12:VAL:HG22	1:A:78:LYS:H	9	0.11
(1,2447)	1:A:12:VAL:HG23	1:A:78:LYS:H	9	0.11
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	2	0.11
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	2	0.11
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	2	0.11
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	2	0.11
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	2	0.11
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	2	0.11
(1,2445)	1:A:12:VAL:HG11	1:A:77:ILE:HB	12	0.11
(1,2445)	1:A:12:VAL:HG12	1:A:77:ILE:HB	12	0.11
(1,2445)	1:A:12:VAL:HG13	1:A:77:ILE:HB	12	0.11
(1,2445)	1:A:12:VAL:HG21	1:A:77:ILE:HB	12	0.11
(1,2445)	1:A:12:VAL:HG22	1:A:77:ILE:HB	12	0.11
(1,2445)	1:A:12:VAL:HG23	1:A:77:ILE:HB	12	0.11
(1,2289)	1:A:165:THR:HB	1:A:166:GLY:H	15	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG21	5	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG22	5	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG23	5	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG21	14	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG22	14	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG23	14	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG21	18	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG22	18	0.11
(1,2230)	1:A:155:ILE:H	1:A:155:ILE:HG23	18	0.11
(1,2207)	1:A:113:VAL:HB	1:A:151:GLN:H	2	0.11
(1,2207)	1:A:113:VAL:HB	1:A:151:GLN:H	3	0.11
(1,2188)	1:A:96:LEU:HD21	1:A:147:PHE:H	1	0.11
(1,2188)	1:A:96:LEU:HD22	1:A:147:PHE:H	1	0.11
(1,2188)	1:A:96:LEU:HD23	1:A:147:PHE:H	1	0.11
(1,2187)	1:A:143:ALA:HB1	1:A:147:PHE:H	17	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,2187)	1:A:143:ALA:HB2	1:A:147:PHE:H	17	0.11
(1,2187)	1:A:143:ALA:HB3	1:A:147:PHE:H	17	0.11
(1,2169)	1:A:96:LEU:HG	1:A:143:ALA:H	5	0.11
(1,2135)	1:A:135:ILE:HG21	1:A:137:PHE:H	8	0.11
(1,2135)	1:A:135:ILE:HG22	1:A:137:PHE:H	8	0.11
(1,2135)	1:A:135:ILE:HG23	1:A:137:PHE:H	8	0.11
(1,2128)	1:A:95:THR:HB	1:A:137:PHE:H	5	0.11
(1,207)	1:A:35:ASN:HB3	1:A:68:THR:H	18	0.11
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD11	13	0.11
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD12	13	0.11
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD13	13	0.11
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD11	15	0.11
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD12	15	0.11
(1,1988)	1:A:107:GLN:H	1:A:122:LEU:HD13	15	0.11
(1,1873)	1:A:79:LEU:HB2	1:A:80:GLU:H	16	0.11
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD11	17	0.11
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD12	17	0.11
(1,1538)	1:A:29:SER:H	1:A:44:ILE:HD13	17	0.11
(1,1469)	1:A:17:PHE:H	1:A:48:ARG:HB2	5	0.11
(1,1469)	1:A:17:PHE:H	1:A:48:ARG:HB2	14	0.11
(1,1462)	1:A:16:ASN:H	1:A:24:LEU:HD11	2	0.11
(1,1462)	1:A:16:ASN:H	1:A:24:LEU:HD12	2	0.11
(1,1462)	1:A:16:ASN:H	1:A:24:LEU:HD13	2	0.11
(1,1433)	1:A:13:GLY:H	1:A:50:PHE:HB2	15	0.11
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	1	0.11
(1,1400)	1:A:9:ASN:H	1:A:61:LEU:HG	20	0.11
(1,1312)	1:A:55:PHE:HD1	1:A:62:GLU:H	17	0.11
(1,1312)	1:A:55:PHE:HD2	1:A:62:GLU:H	17	0.11
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	2	0.11
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	2	0.11
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	9	0.11
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	9	0.11
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	11	0.11
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	11	0.11
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	12	0.11
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	12	0.11
(1,1275)	1:A:11:PHE:HD1	1:A:79:LEU:HA	20	0.11
(1,1275)	1:A:11:PHE:HD2	1:A:79:LEU:HA	20	0.11
(1,1258)	1:A:164:TYR:HD1	1:A:165:THR:HA	15	0.11
(1,1258)	1:A:164:TYR:HD2	1:A:165:THR:HA	15	0.11
(1,1173)	1:A:170:GLY:H	1:A:173:LEU:HD11	7	0.11
(1,1173)	1:A:170:GLY:H	1:A:173:LEU:HD12	7	0.11

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Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1173)	1:A:170:GLY:H	1:A:173:LEU:HD13	7	0.11
(1,1139)	1:A:151:GLN:HB2	1:A:161:SER:HA	1	0.11
(1,1139)	1:A:151:GLN:HB2	1:A:161:SER:HA	11	0.11
(1,1139)	1:A:151:GLN:HB2	1:A:161:SER:HA	12	0.11
(1,109)	1:A:17:PHE:HB3	1:A:49:LYS:H	19	0.11
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG21	10	0.11
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG22	10	0.11
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG23	10	0.11
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG21	18	0.11
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG22	18	0.11
(1,1036)	1:A:145:LYS:H	1:A:146:THR:HG23	18	0.11

10 Dihedral-angle violation analysis

Dihedral angle analysis failed due to data error in the dihedral angle restraints, possibly missing target value