



# Full wwPDB NMR Structure Validation Report ⓘ

Apr 26, 2016 – 10:05 PM BST

PDB ID : 2JXM  
Title : Ensemble of twenty structures of the Prochlorothrix hollandica plastocyanin-cytochrome f complex  
Authors : Hulsker, R.; Baranova, M.; Bullerjahn, G.; Ubbink, M.  
Deposited on : 2007-11-22

This is a Full wwPDB NMR Structure Validation Report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/NMRValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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

Cyrange : Kirchner and Güntert (2011)  
NmrClust : Kelley et al. (1996)  
MolProbity : 4.02b-467  
Mogul : 1.7.1 (RC1), CSD as537be (2016)  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
RCI : v\_1n\_11\_5\_13\_A (Berjanski et al., 2005)  
PANAV : Wang et al. (2010)  
ShiftChecker : rb-20027457  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : rb-20027457

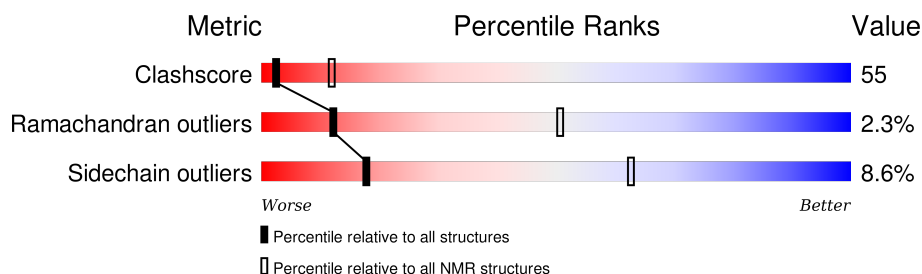
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*SOLUTION NMR*

The overall completeness of chemical shifts assignment was not calculated.

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	114402	11133
Ramachandran outliers	111179	9975
Sidechain outliers	111093	9958

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  $\geq 3$ , 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	97	
2	B	249	

## 2 Ensemble composition and analysis

This entry contains 20 models. Model 1 is the overall representative, medoid model (most similar to other models).

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:1-A:97 (97)	0.00	20
2	B:1-B:249 (249)	0.00	1

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 3 clusters. No single-model clusters were found.

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

### 3 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 5179 atoms, of which 2547 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Plastocyanin.

Mol	Chain	Residues	Atoms						Trace
1	A	97	Total	C	H	N	O	S	0
			1424	457	711	114	138	4	

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	2	SER	THR	ENGINEERED	UNP P50057

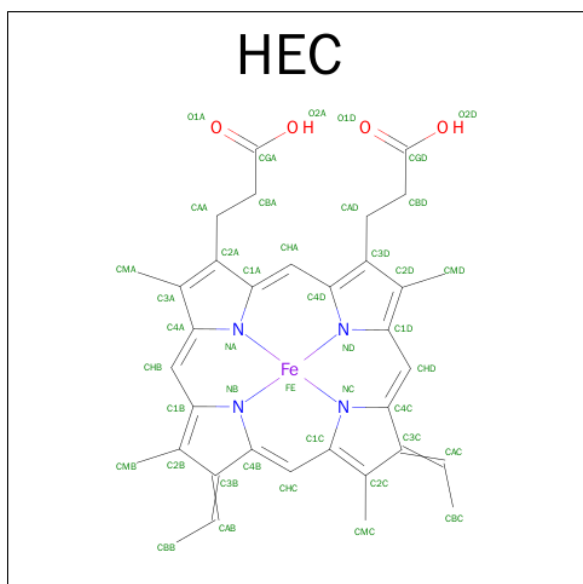
- Molecule 2 is a protein called Cytochrome f.

Mol	Chain	Residues	Atoms						Trace
2	B	249	Total	C	H	N	O	S	0
			3679	1192	1804	295	382	6	

- Molecule 3 is COPPER (II) ION (three-letter code: CU) (formula: Cu).

Mol	Chain	Residues	Atoms	
3	A	1	Total	Cu
			1	1

- Molecule 4 is HEME C (three-letter code: HEC) (formula:  $C_{34}H_{34}FeN_4O_4$ ).



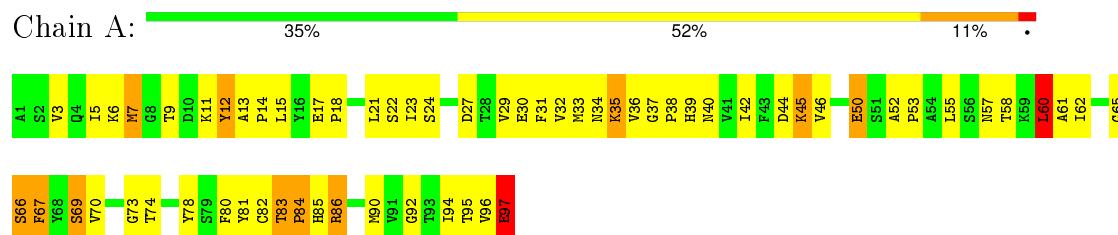
Mol	Chain	Residues	Atoms					
			Total	C	Fe	H	N	O
4	B	1	75	34	1	32	4	4

## 4 Residue-property plots

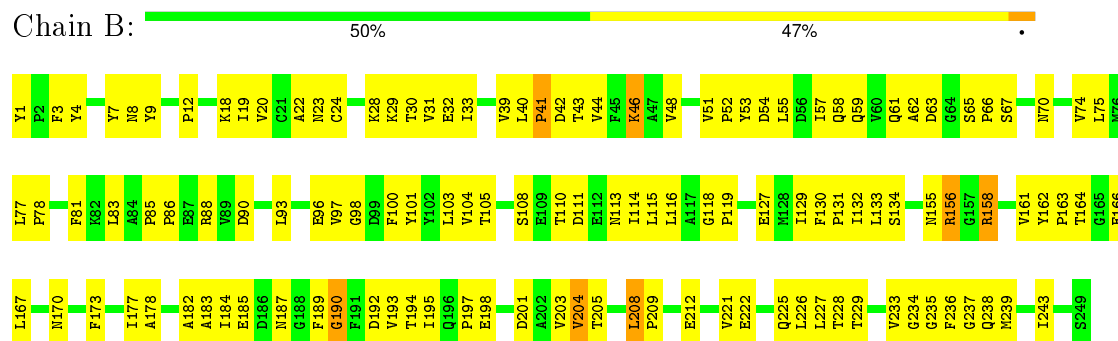
### 4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA and DNA 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: Plastocyanin



#### • Molecule 2: Cytochrome f



### 4.2 Scores per residue for each member of the ensemble

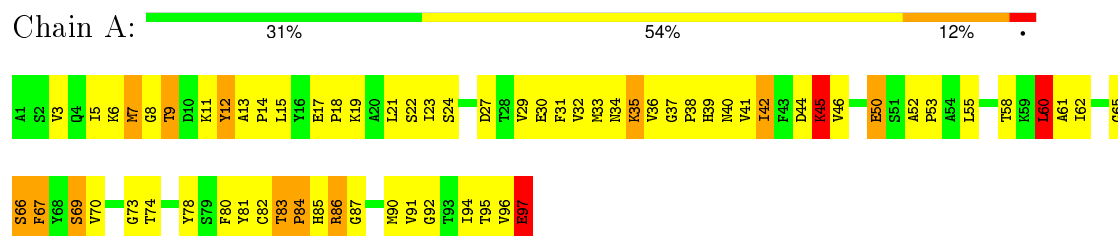
Colouring as in section 4.1 above.

#### 4.2.1 Score per residue for model 1 (medoid)

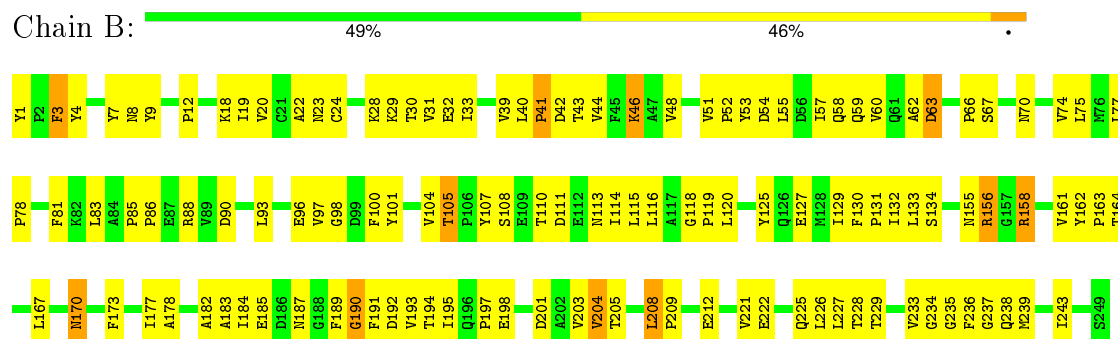
#### • Molecule 1: Plastocyanin





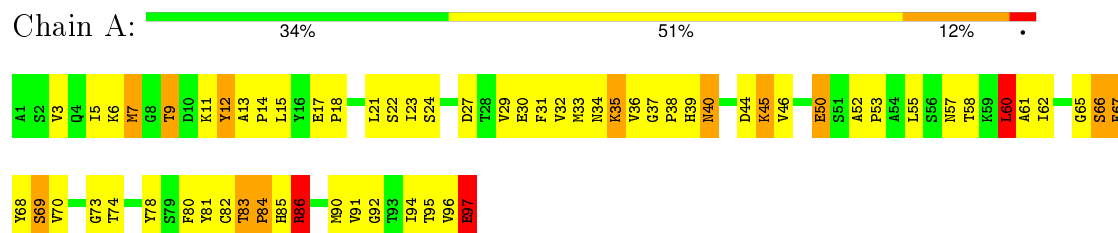


- Molecule 2: Cytochrome f

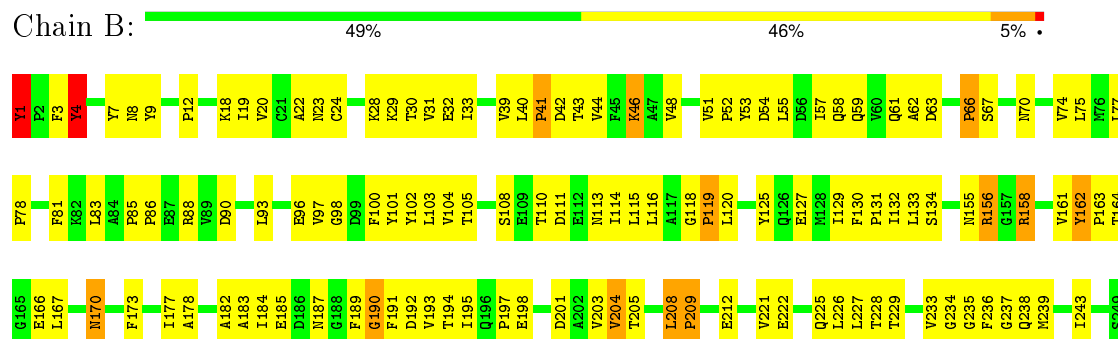


#### 4.2.4 Score per residue for model 4

- Molecule 1: Plastocyanin



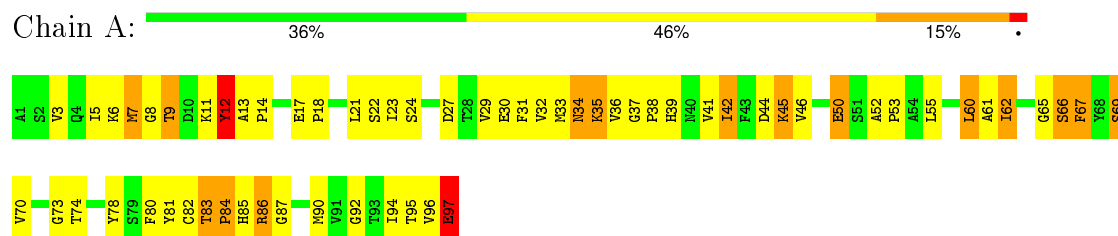
- Molecule 2: Cytochrome f



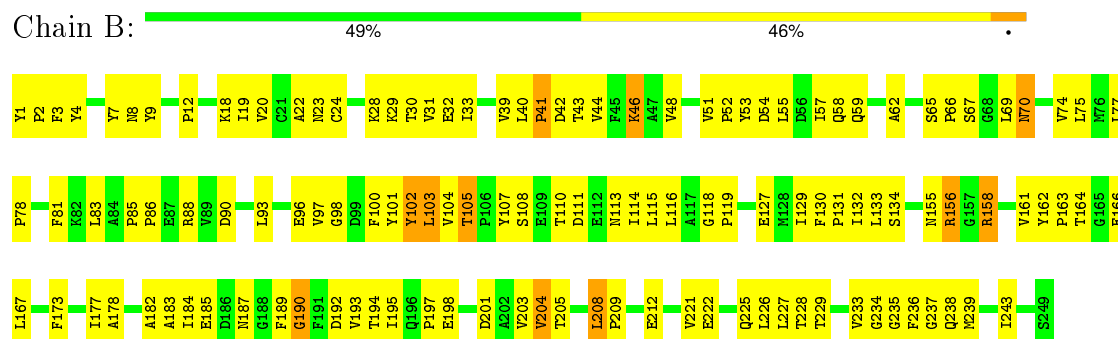
#### 4.2.5 Score per residue for model 5

- Molecule 1: Plastocyanin



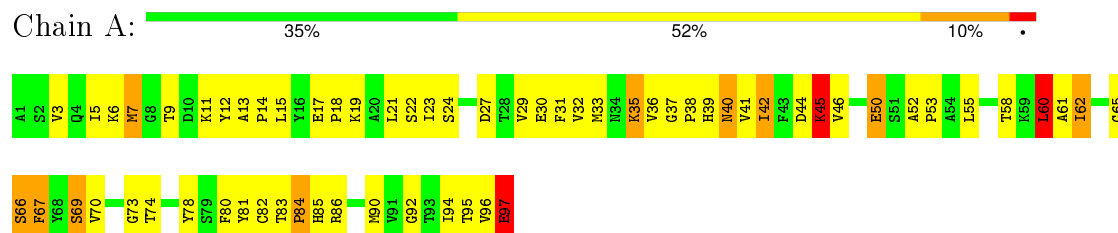


• Molecule 2: Cytochrome f

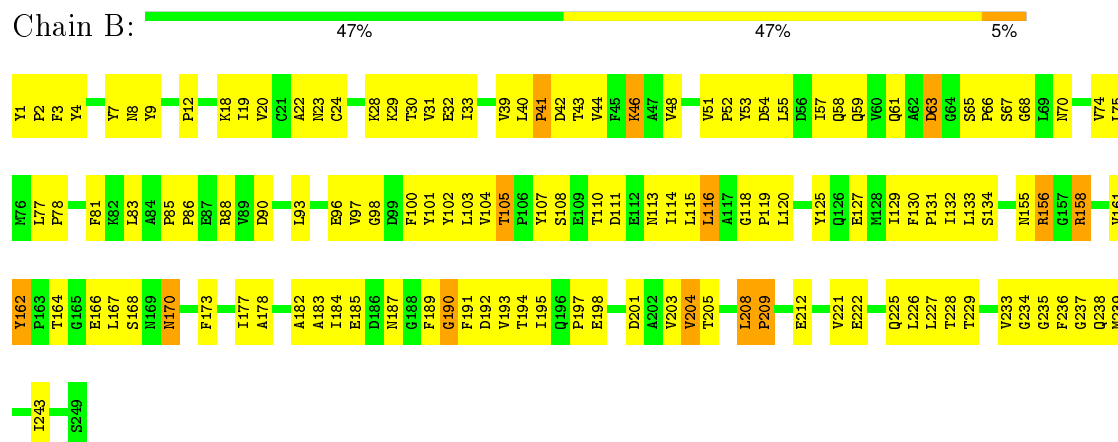


#### 4.2.6 Score per residue for model 6

• Molecule 1: Plastocyanin

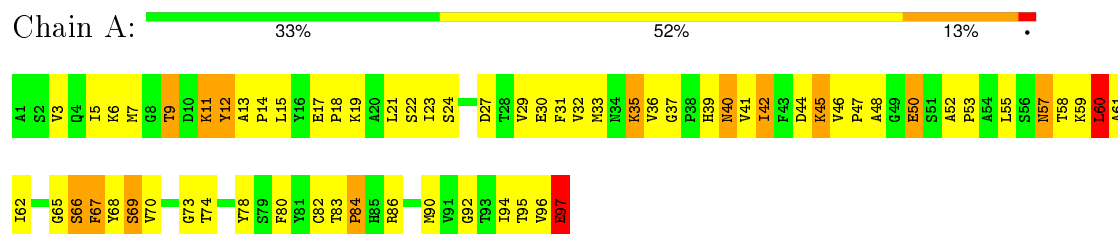


• Molecule 2: Cytochrome f

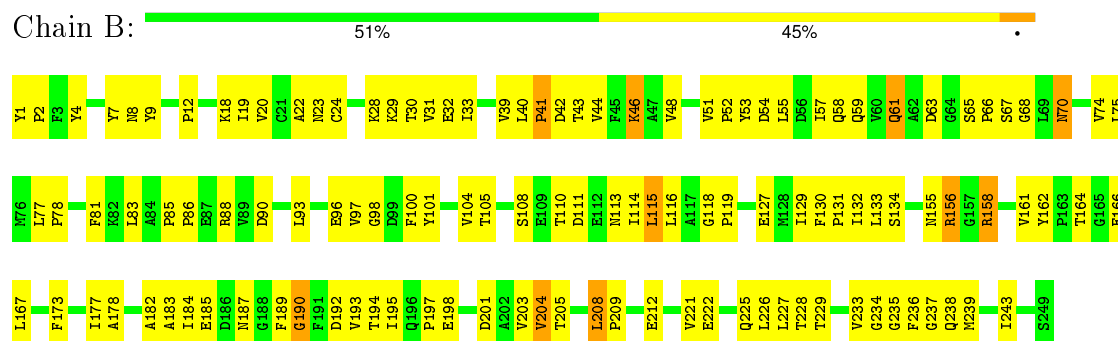


## 4.2.7 Score per residue for model 7

## • Molecule 1: Plastocyanin

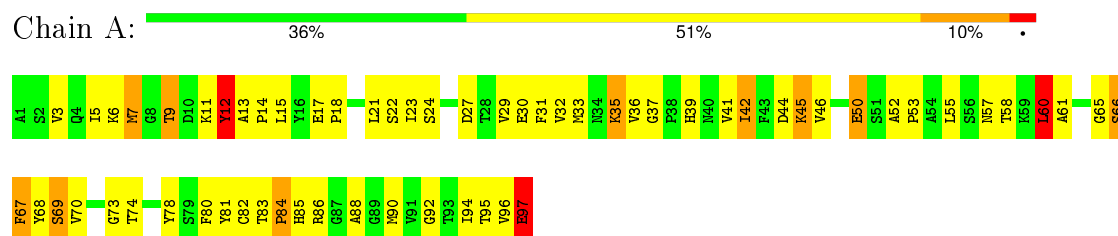


## • Molecule 2: Cytochrome f

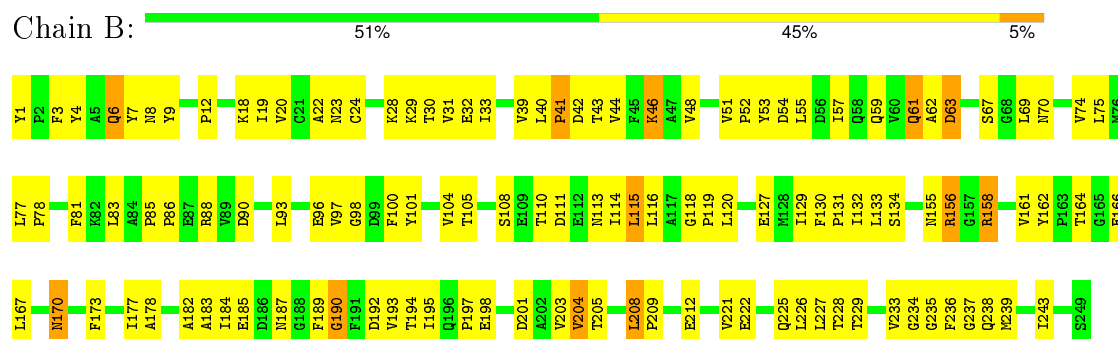


## 4.2.8 Score per residue for model 8

## • Molecule 1: Plastocyanin

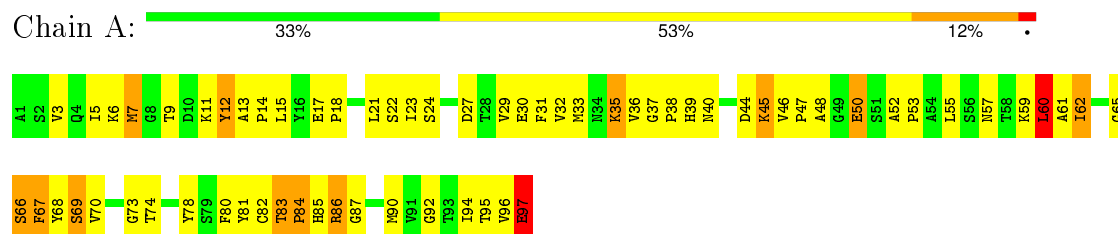


## • Molecule 2: Cytochrome f

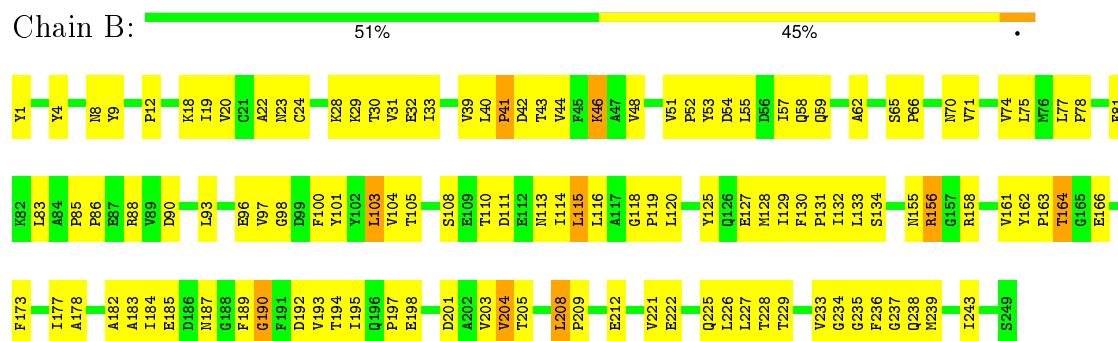


### 4.2.9 Score per residue for model 9

#### • Molecule 1: Plastocyanin

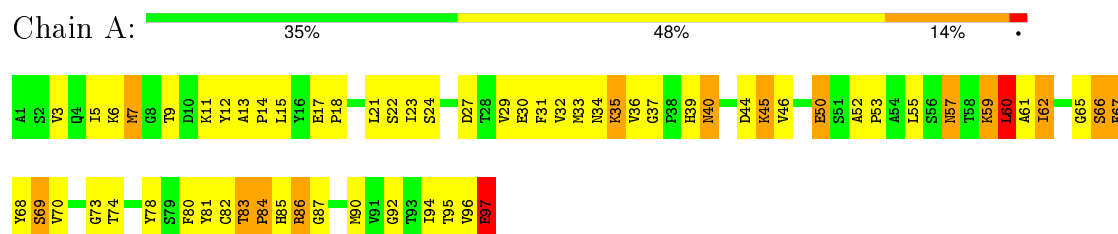


#### • Molecule 2: Cytochrome f

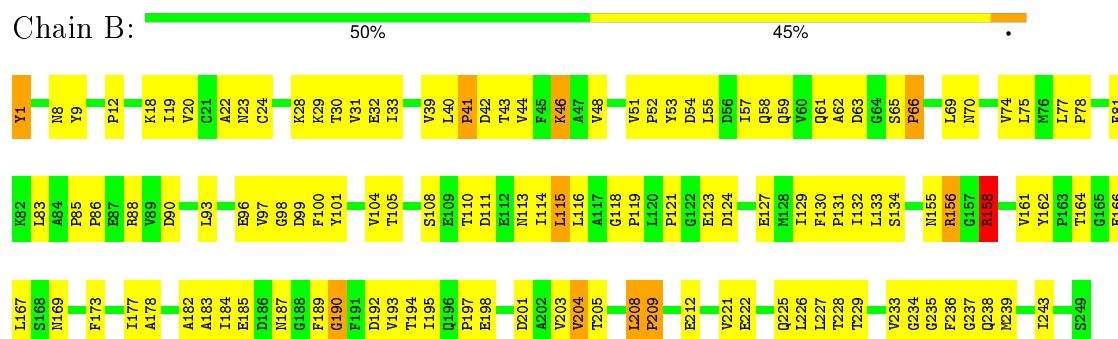


### 4.2.10 Score per residue for model 10

#### • Molecule 1: Plastocyanin

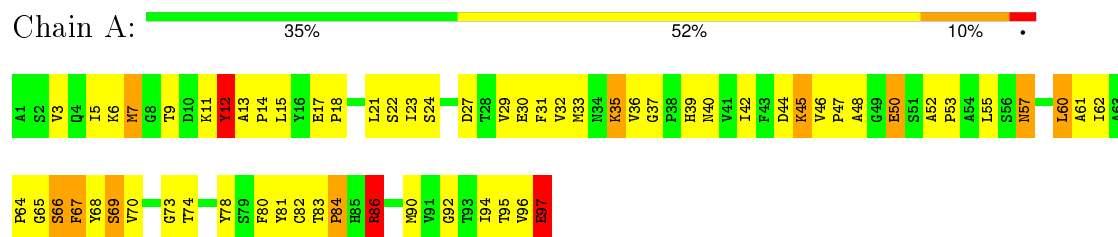


#### • Molecule 2: Cytochrome f

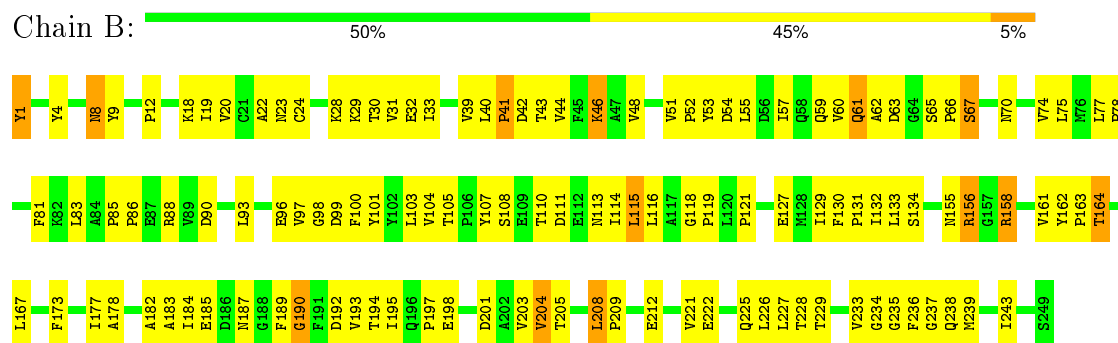


## 4.2.11 Score per residue for model 11

## • Molecule 1: Plastocyanin

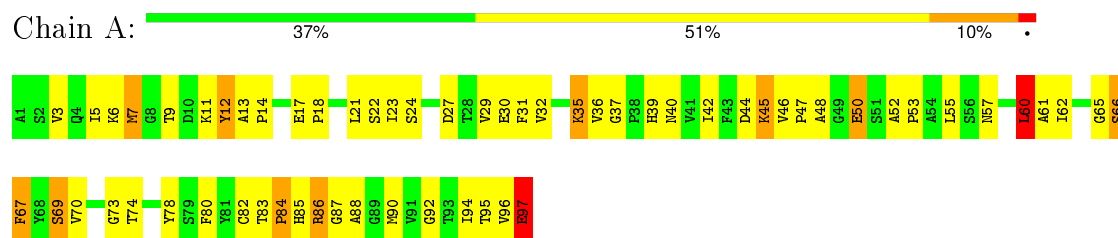


## • Molecule 2: Cytochrome f

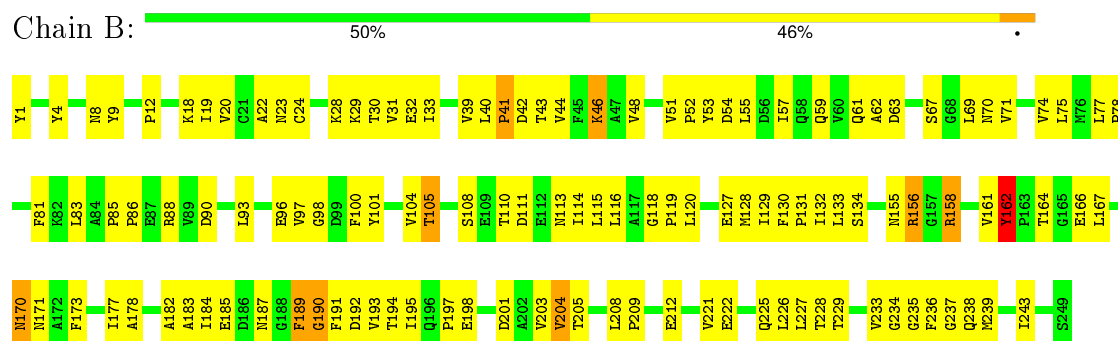


## 4.2.12 Score per residue for model 12

## • Molecule 1: Plastocyanin

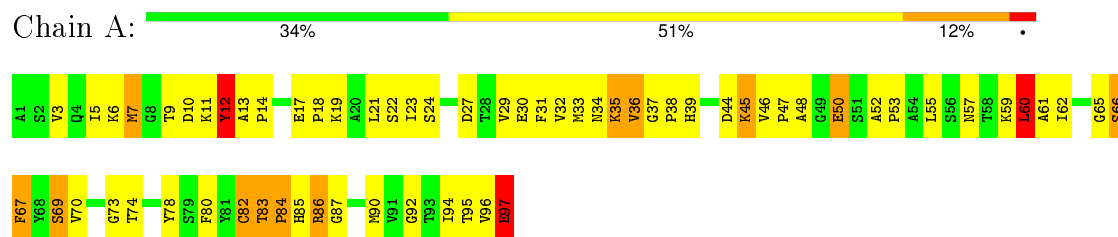


## • Molecule 2: Cytochrome f

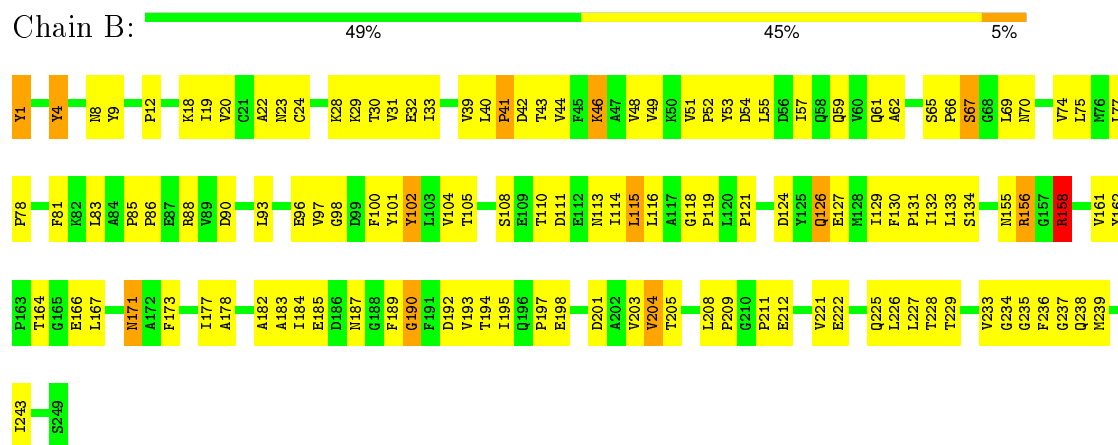


## 4.2.13 Score per residue for model 13

## • Molecule 1: Plastocyanin

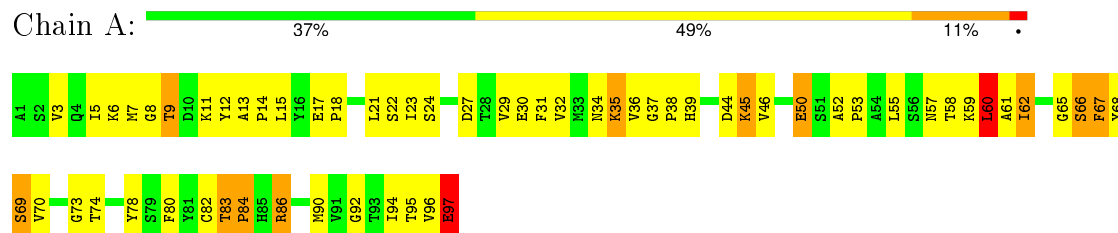


## • Molecule 2: Cytochrome f

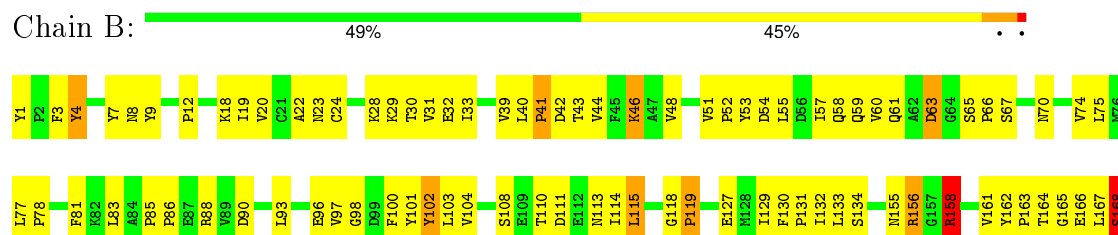


## 4.2.14 Score per residue for model 14

## • Molecule 1: Plastocyanin



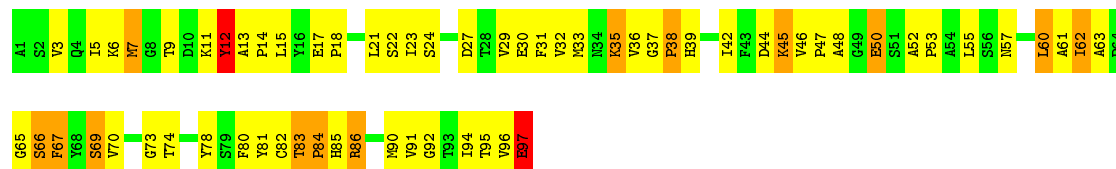
## • Molecule 2: Cytochrome f



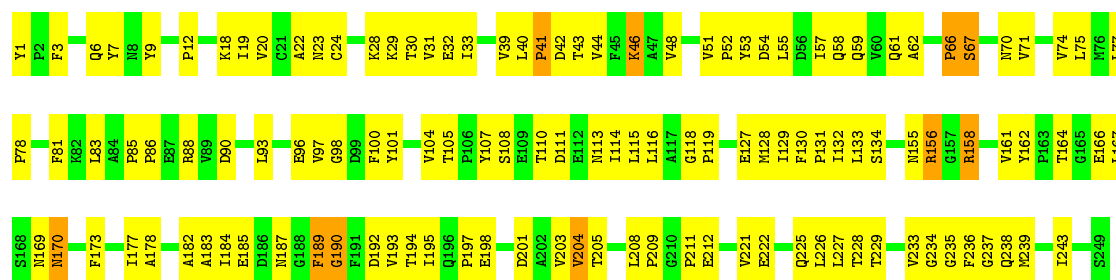


#### 4.2.15 Score per residue for model 15

- Molecule 1: Plastocyanin

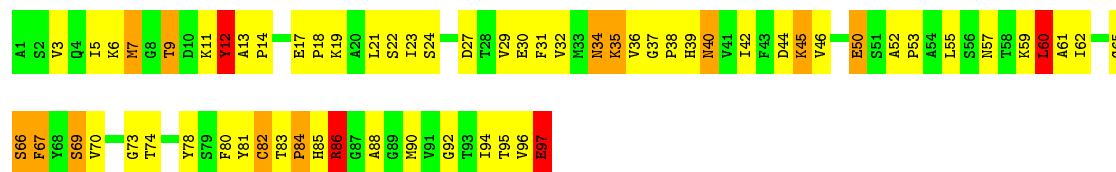


- Molecule 2: Cytochrome f

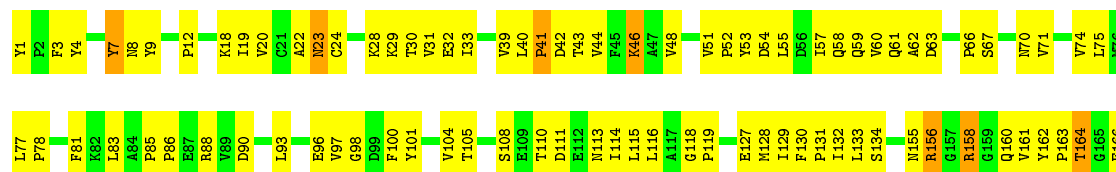
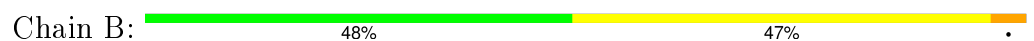


#### 4.2.16 Score per residue for model 16

- Molecule 1: Plastocyanin



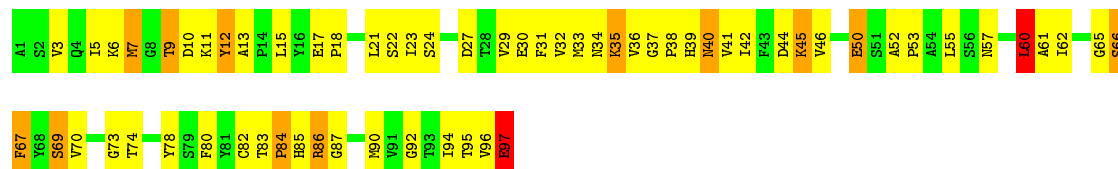
- Molecule 2: Cytochrome f



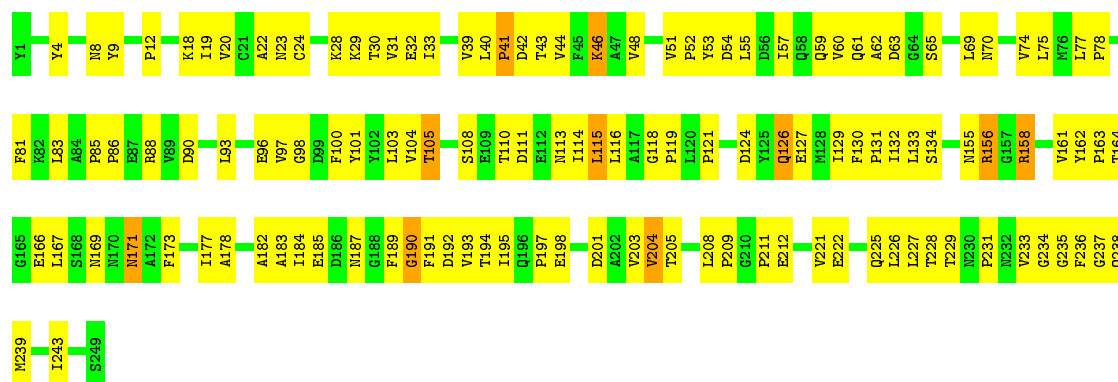


#### 4.2.17 Score per residue for model 17

- Molecule 1: Plastocyanin

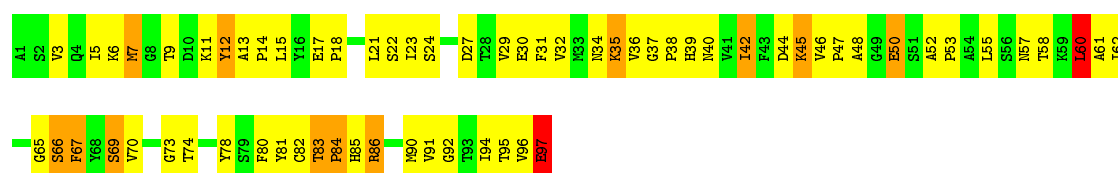


- Molecule 2: Cytochrome f

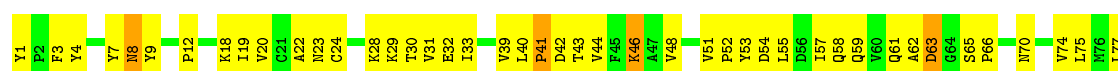


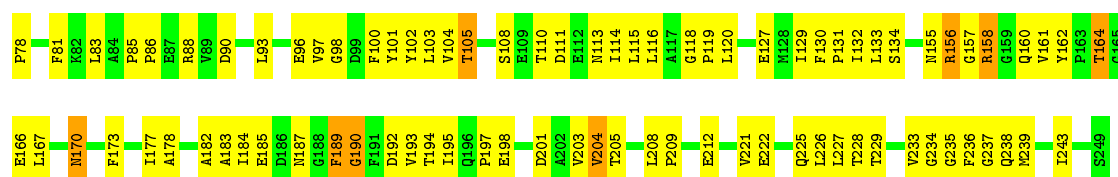
#### 4.2.18 Score per residue for model 18

- Molecule 1: Plastocyanin



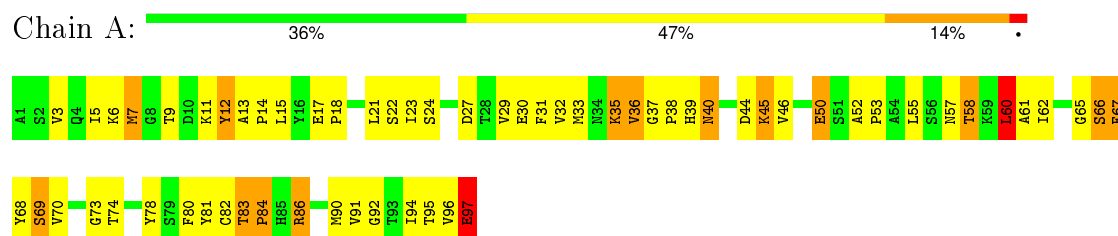
- Molecule 2: Cytochrome f



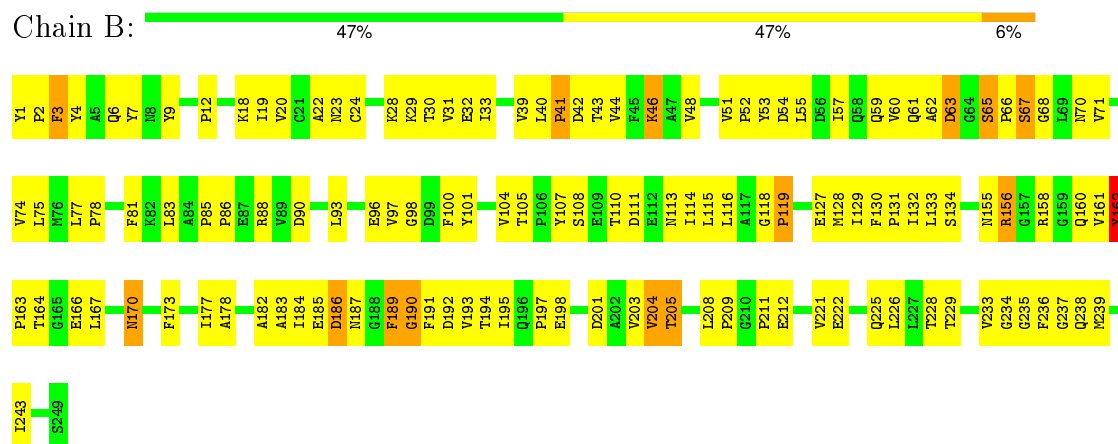


#### 4.2.19 Score per residue for model 19

- Molecule 1: Plastocyanin

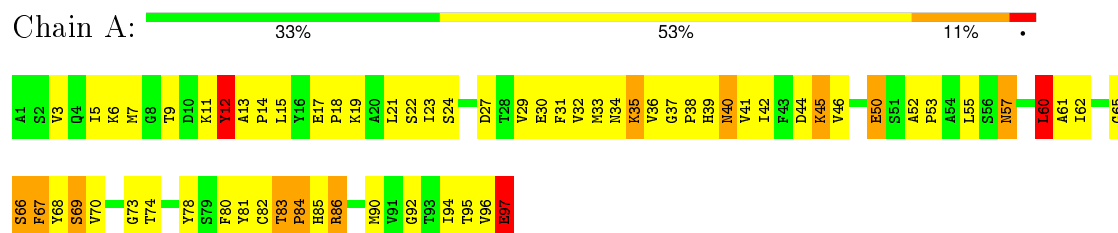


- Molecule 2: Cytochrome f



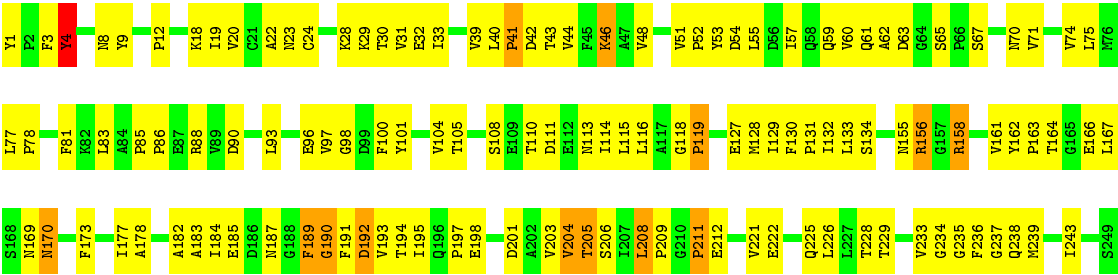
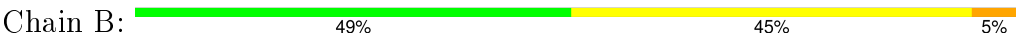
#### 4.2.20 Score per residue for model 20

- Molecule 1: Plastocyanin



- Molecule 2: Cytochrome f





## 5 Refinement protocol and experimental data overview

The models were refined using the following method: *Rigid Body docking, Energy minimisation*.

Of the 1000 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
X-PLOR NIH	refinement	

No chemical shift data was provided. No validations of the models with respect to experimental NMR restraints is performed at this time.

## 6 Model quality ⓘ

### 6.1 Standard geometry ⓘ

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the (average) root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#Z>5	RMSZ	#Z>5
1	A	0.68±0.03	1±0/731 (0.2±0.1%)	0.91±0.03	0±0/995 (0.0±0.0%)
2	B	0.94±0.03	1±1/1918 (0.0±0.0%)	1.18±0.07	5±2/2621 (0.2±0.1%)
All	All	0.87	37/52980 (0.1%)	1.11	102/72320 (0.1%)

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

Mol	Chain	Chirality	Planarity
1	A	0.0±0.0	0.2±0.4
2	B	0.0±0.0	1.2±0.4
All	All	0	29

All unique bond outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
2	B	171	ASN	CG-OD1	17.82	1.63	1.24	17	1
2	B	23	ASN	CA-CB	13.71	1.88	1.53	16	1
2	B	170	ASN	CA-CB	9.10	1.76	1.53	3	6
1	A	57	ASN	CB-CG	-8.86	1.30	1.51	11	2
2	B	171	ASN	CB-CG	-8.76	1.30	1.51	17	1
2	B	58	GLN	CG-CD	-6.61	1.35	1.51	7	1
2	B	168	SER	CA-CB	5.97	1.61	1.52	14	1
2	B	4	TYR	CA-CB	5.28	1.65	1.53	20	1
2	B	4	TYR	CG-CD1	5.14	1.45	1.39	20	1
1	A	97	GLU	C-OXT	5.14	1.33	1.23	19	20
2	B	4	TYR	CB-CG	5.11	1.59	1.51	20	1
1	A	57	ASN	CG-ND2	-5.08	1.20	1.32	7	1

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
2	B	171	ASN	CB-CA-C	-26.12	58.15	110.40	17	3
2	B	171	ASN	N-CA-CB	22.27	150.69	110.60	13	3
2	B	171	ASN	OD1-CG-ND2	-14.84	87.77	121.90	12	2
2	B	187	ASN	OD1-CG-ND2	-12.97	92.07	121.90	2	1
2	B	168	SER	CB-CA-C	-12.60	86.16	110.10	14	1
2	B	171	ASN	CB-CG-OD1	-12.33	96.95	121.60	17	3
2	B	187	ASN	CB-CG-ND2	12.15	145.87	116.70	2	1
1	A	57	ASN	N-CA-CB	11.48	131.27	110.60	11	2
2	B	171	ASN	CB-CG-ND2	11.31	143.85	116.70	12	2
2	B	1	TYR	CB-CG-CD2	-10.36	114.78	121.00	4	1
2	B	4	TYR	CA-CB-CG	-9.64	95.09	113.40	13	3
2	B	8	ASN	OD1-CG-ND2	-9.35	100.39	121.90	11	1
2	B	1	TYR	CA-CB-CG	8.92	130.36	113.40	4	1
2	B	23	ASN	N-CA-CB	8.53	125.95	110.60	16	1
2	B	162	TYR	CB-CA-C	-8.12	94.15	110.40	19	1
2	B	23	ASN	CA-CB-CG	-8.06	95.67	113.40	16	1
2	B	4	TYR	CB-CG-CD2	-7.93	116.24	121.00	20	2
2	B	8	ASN	CB-CG-ND2	7.91	135.69	116.70	11	1
2	B	162	TYR	CA-CB-CG	-7.69	98.79	113.40	19	2
2	B	4	TYR	CB-CG-CD1	7.39	125.44	121.00	20	2
2	B	168	SER	N-CA-CB	7.01	121.02	110.50	14	1
2	B	23	ASN	CB-CG-OD1	-6.98	107.63	121.60	16	1
2	B	190	GLY	N-CA-C	-6.93	95.78	113.10	1	20
2	B	58	GLN	CG-CD-NE2	6.86	133.16	116.70	7	1
1	A	34	ASN	N-CA-CB	6.82	122.88	110.60	18	4
2	B	1	TYR	CB-CA-C	-6.61	97.17	110.40	4	1
2	B	162	TYR	CB-CG-CD1	-6.55	117.07	121.00	12	2
2	B	170	ASN	CA-CB-CG	-6.36	99.40	113.40	3	7
2	B	211	PRO	N-CA-CB	5.86	110.33	103.30	20	1
2	B	66	PRO	N-CD-CG	-5.83	94.46	103.20	7	2
2	B	4	TYR	CB-CA-C	-5.77	98.87	110.40	20	1
2	B	126	GLN	CB-CG-CD	-5.42	97.50	111.60	17	2
1	A	12	TYR	CA-CB-CG	-5.32	103.29	113.40	20	1
2	B	209	PRO	CA-N-CD	5.20	118.99	111.70	10	3
2	B	110	THR	C-N-CA	5.11	134.47	121.70	1	20
2	B	162	TYR	CB-CG-CD2	-5.07	117.96	121.00	1	1

There are no chirality outliers.

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

Mol	Chain	Res	Type	Group	Models (Total)
2	B	158	ARG	Sidechain	20
1	A	86	ARG	Sidechain	5
2	B	171	ASN	Sidechain	3
2	B	1	TYR	Sidechain	1

## 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	713	711	711	93±16
2	B	1875	1804	1805	209±15
4	B	43	32	31	14±2
All	All	52640	50940	50951	5655

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 55.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:4:TYR:CZ	2:B:163:PRO:HG2	1.59	1.28	4	1
2:B:170:ASN:CA	2:B:170:ASN:CB	1.58	1.76	4	3
2:B:170:ASN:CB	2:B:170:ASN:CA	1.58	1.76	12	3
1:A:60:LEU:HD23	2:B:63:ASP:CB	1.51	1.29	19	1
1:A:37:GLY:O	2:B:1:TYR:CE1	1.49	1.65	4	1
2:B:23:ASN:CA	2:B:23:ASN:CB	1.48	1.88	16	1
2:B:4:TYR:CE2	2:B:163:PRO:HG2	1.47	1.43	4	1
1:A:81:TYR:HB2	1:A:86:ARG:NH2	1.46	1.11	3	2
1:A:60:LEU:CD1	2:B:63:ASP:HB3	1.45	1.35	12	1
1:A:60:LEU:CD2	2:B:63:ASP:CB	1.43	1.95	19	2
2:B:4:TYR:CZ	2:B:163:PRO:CG	1.40	2.03	4	1
2:B:162:TYR:O	2:B:162:TYR:CD1	1.38	1.76	19	1
1:A:37:GLY:C	2:B:1:TYR:OH	1.35	1.64	4	1
1:A:60:LEU:HD11	2:B:63:ASP:CB	1.34	1.52	12	1
2:B:1:TYR:CD2	2:B:4:TYR:HE2	1.33	1.40	7	2
1:A:82:CYS:O	1:A:86:ARG:NE	1.33	1.60	16	1
1:A:60:LEU:CD2	2:B:63:ASP:HB2	1.33	1.50	19	2
1:A:12:TYR:OH	2:B:3:PHE:HB2	1.30	1.19	20	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:4:TYR:CE2	2:B:163:PRO:CG	1.29	2.13	4	1
2:B:1:TYR:CD2	2:B:4:TYR:CE2	1.27	2.22	7	5
2:B:162:TYR:OH	2:B:168:SER:HA	1.26	1.25	6	2
1:A:81:TYR:CB	1:A:86:ARG:HH21	1.25	1.42	3	1
1:A:86:ARG:HH12	1:A:87:GLY:CA	1.25	1.42	10	1
1:A:37:GLY:O	2:B:1:TYR:CZ	1.24	1.90	4	1
1:A:86:ARG:O	1:A:86:ARG:HD3	1.24	1.27	3	2
2:B:161:VAL:C	2:B:162:TYR:HD1	1.23	1.34	12	1
2:B:162:TYR:CD2	2:B:163:PRO:HD2	1.23	1.66	9	2
1:A:37:GLY:O	4:B:250:HEC:CGD	1.23	1.84	20	2
1:A:60:LEU:CD1	2:B:61:GLN:NE2	1.22	2.02	19	1
2:B:189:PHE:CD1	2:B:209:PRO:HG3	1.21	1.70	15	12
1:A:38:PRO:HD3	2:B:119:PRO:O	1.21	1.09	2	1
1:A:60:LEU:CG	2:B:63:ASP:HB2	1.21	1.64	12	1
1:A:60:LEU:CG	2:B:63:ASP:CB	1.20	2.19	12	1
2:B:162:TYR:CG	2:B:164:THR:HG22	1.19	1.71	19	2
1:A:83:THR:O	2:B:62:ALA:HB3	1.19	1.36	13	2
1:A:81:TYR:CB	1:A:86:ARG:NH2	1.19	2.04	3	3
1:A:60:LEU:HD21	2:B:63:ASP:CB	1.19	1.67	12	1
2:B:24:CYS:SG	4:B:250:HEC:CHD	1.17	2.31	5	20
2:B:1:TYR:CZ	2:B:119:PRO:CG	1.17	2.27	20	1
2:B:1:TYR:CZ	2:B:119:PRO:HG2	1.17	1.74	20	1
1:A:12:TYR:CZ	2:B:3:PHE:HB2	1.17	1.75	19	2
1:A:86:ARG:HH22	1:A:91:VAL:CG1	1.16	1.53	19	3
1:A:38:PRO:HB2	1:A:60:LEU:CD1	1.16	1.70	15	1
2:B:162:TYR:CD1	2:B:162:TYR:C	1.16	2.06	19	1
1:A:86:ARG:NH1	1:A:87:GLY:CA	1.15	2.10	10	1
1:A:12:TYR:OH	2:B:3:PHE:CB	1.14	1.94	20	2
2:B:162:TYR:OH	2:B:168:SER:CA	1.14	1.93	6	1
1:A:60:LEU:CD2	2:B:62:ALA:HB1	1.12	1.72	15	1
2:B:161:VAL:C	2:B:162:TYR:CD1	1.12	2.22	12	1
2:B:162:TYR:CG	2:B:163:PRO:HD2	1.12	1.78	9	1
2:B:1:TYR:CD1	2:B:1:TYR:N	1.11	2.15	13	2
1:A:58:THR:OG1	2:B:63:ASP:CB	1.11	1.97	8	1
2:B:104:VAL:CG1	2:B:115:LEU:HD12	1.11	1.76	17	3
2:B:189:PHE:CD2	2:B:209:PRO:HD3	1.10	1.80	5	19
1:A:58:THR:OG1	2:B:63:ASP:HB2	1.10	1.42	8	2
2:B:61:GLN:HG2	2:B:65:SER:O	1.10	1.43	19	8
1:A:86:ARG:C	1:A:86:ARG:HD2	1.10	1.67	9	1
1:A:86:ARG:NH2	1:A:91:VAL:CG1	1.10	2.14	19	2
1:A:60:LEU:CD1	2:B:63:ASP:CB	1.09	2.15	12	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:60:LEU:CD1	2:B:61:GLN:CD	1.09	2.21	19	2
1:A:87:GLY:HA3	2:B:164:THR:HG23	1.09	1.13	3	1
1:A:86:ARG:HH12	1:A:91:VAL:CG1	1.09	1.61	18	3
2:B:1:TYR:HD2	2:B:4:TYR:CE2	1.09	1.54	7	3
1:A:38:PRO:CD	2:B:119:PRO:O	1.08	2.00	2	1
1:A:38:PRO:HD2	2:B:62:ALA:HB2	1.08	1.20	20	2
1:A:60:LEU:HD21	2:B:63:ASP:CA	1.08	1.77	12	1
1:A:86:ARG:CA	1:A:86:ARG:HE	1.08	1.61	18	1
1:A:37:GLY:C	2:B:1:TYR:CZ	1.08	2.25	4	1
2:B:162:TYR:HB3	2:B:164:THR:HG22	1.07	1.16	9	13
1:A:86:ARG:NH1	1:A:87:GLY:N	1.07	2.02	10	2
2:B:189:PHE:CE1	2:B:209:PRO:HG3	1.07	1.84	4	14
2:B:162:TYR:HB3	2:B:164:THR:CG2	1.07	1.78	9	2
1:A:60:LEU:HD23	2:B:62:ALA:CB	1.07	1.79	18	2
1:A:86:ARG:HH22	1:A:91:VAL:HG11	1.06	0.96	19	1
2:B:104:VAL:HG13	2:B:115:LEU:HG	1.06	1.25	6	16
1:A:60:LEU:CG	2:B:62:ALA:HB1	1.06	1.81	15	1
2:B:104:VAL:HG11	2:B:115:LEU:HD12	1.05	1.28	17	3
1:A:86:ARG:HH11	1:A:86:ARG:HG2	1.05	0.90	1	1
1:A:38:PRO:CD	2:B:119:PRO:HG2	1.05	1.81	4	7
1:A:46:VAL:HG13	1:A:52:ALA:HB2	1.05	1.29	17	20
1:A:62:ILE:HG23	2:B:121:PRO:CG	1.05	1.81	17	2
2:B:162:TYR:CD2	2:B:163:PRO:N	1.05	2.20	19	1
1:A:38:PRO:HD3	2:B:119:PRO:CG	1.04	1.82	3	5
2:B:162:TYR:HB2	2:B:164:THR:HG22	1.04	1.14	6	12
1:A:60:LEU:CD2	2:B:63:ASP:HB3	1.04	1.68	19	1
2:B:162:TYR:CG	2:B:163:PRO:N	1.04	2.17	19	1
1:A:60:LEU:HD23	2:B:62:ALA:HB2	1.03	1.13	18	1
1:A:8:GLY:O	1:A:34:ASN:ND2	1.03	1.91	5	4
2:B:162:TYR:N	2:B:162:TYR:HD1	1.03	1.35	12	1
2:B:164:THR:HG23	2:B:166:GLU:H	1.02	1.11	14	16
1:A:38:PRO:HD3	2:B:119:PRO:HG2	1.01	1.22	1	7
1:A:57:ASN:OD1	1:A:68:TYR:OH	1.01	1.77	11	1
2:B:4:TYR:CE1	2:B:163:PRO:CG	1.00	2.44	4	3
1:A:60:LEU:HD11	2:B:61:GLN:OE1	1.00	1.55	20	3
2:B:1:TYR:CD2	2:B:3:PHE:CZ	1.00	2.49	19	1
1:A:60:LEU:HD13	2:B:61:GLN:NE2	1.00	1.71	19	1
1:A:86:ARG:HH12	1:A:91:VAL:HG13	1.00	1.10	4	2
1:A:62:ILE:HG23	2:B:121:PRO:HG2	1.00	1.28	17	2
1:A:87:GLY:CA	2:B:164:THR:HG23	0.99	1.87	3	1
2:B:162:TYR:HE1	2:B:168:SER:N	0.99	1.55	6	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:162:TYR:CZ	2:B:168:SER:HA	0.99	1.93	6	1
1:A:60:LEU:HD21	2:B:63:ASP:HB2	0.99	1.17	12	1
2:B:59:GLN:HG3	2:B:233:VAL:HG22	0.99	1.28	12	7
1:A:83:THR:O	1:A:86:ARG:CG	0.99	2.11	11	2
1:A:60:LEU:HD21	2:B:61:GLN:CG	0.99	1.88	8	1
1:A:83:THR:HG21	2:B:61:GLN:NE2	0.98	1.73	17	1
1:A:86:ARG:NE	1:A:86:ARG:O	0.98	1.96	18	2
1:A:58:THR:HG21	2:B:63:ASP:HB3	0.98	1.00	14	2
1:A:86:ARG:NH1	1:A:86:ARG:HG2	0.98	1.68	1	1
2:B:164:THR:HG22	2:B:166:GLU:H	0.98	1.12	1	1
1:A:12:TYR:O	2:B:3:PHE:CZ	0.98	2.16	16	1
1:A:14:PRO:HG3	2:B:3:PHE:HE2	0.98	1.17	18	1
2:B:162:TYR:CB	2:B:164:THR:HG22	0.98	1.87	14	17
2:B:24:CYS:SG	4:B:250:HEC:HHD	0.98	1.99	20	20
1:A:38:PRO:CB	1:A:60:LEU:HD11	0.98	1.87	15	1
1:A:14:PRO:HG3	1:A:36:VAL:HG21	0.97	0.98	16	7
1:A:40:ASN:HB3	1:A:60:LEU:HD22	0.97	1.30	16	1
1:A:62:ILE:HD11	2:B:120:LEU:HA	0.97	1.32	2	1
1:A:83:THR:O	2:B:62:ALA:CB	0.97	2.12	17	2
1:A:38:PRO:HD3	2:B:70:ASN:OD1	0.97	1.59	17	1
1:A:82:CYS:C	1:A:86:ARG:HE	0.97	1.60	16	1
1:A:86:ARG:NE	1:A:86:ARG:HA	0.97	1.74	18	1
1:A:86:ARG:HB3	2:B:164:THR:HG23	0.97	1.34	18	1
2:B:4:TYR:CE1	2:B:163:PRO:CB	0.96	2.48	4	1
1:A:60:LEU:CD2	2:B:62:ALA:HB2	0.96	1.88	18	1
1:A:83:THR:O	1:A:86:ARG:HG2	0.96	1.60	11	3
1:A:60:LEU:CD1	2:B:61:GLN:OE1	0.96	2.14	20	1
1:A:38:PRO:CD	2:B:70:ASN:OD1	0.96	2.14	17	2
1:A:37:GLY:C	2:B:1:TYR:CE1	0.95	2.40	4	1
1:A:86:ARG:NH1	1:A:91:VAL:CG1	0.95	2.28	18	3
2:B:162:TYR:HB2	2:B:164:THR:CG2	0.95	1.91	6	13
1:A:14:PRO:HG3	1:A:36:VAL:CG2	0.95	1.90	16	1
1:A:60:LEU:HD21	2:B:61:GLN:HG3	0.95	1.36	8	1
1:A:86:ARG:CZ	1:A:86:ARG:HA	0.95	1.91	16	1
1:A:58:THR:HG21	2:B:63:ASP:CB	0.94	1.93	14	1
1:A:39:HIS:O	1:A:60:LEU:CD1	0.94	2.15	15	1
2:B:24:CYS:HB2	4:B:250:HEC:CAC	0.94	1.93	20	20
2:B:162:TYR:CG	2:B:164:THR:CG2	0.94	2.49	19	1
2:B:162:TYR:N	2:B:162:TYR:CD1	0.94	2.11	12	1
2:B:4:TYR:CD1	2:B:163:PRO:HG3	0.93	1.99	3	6
1:A:86:ARG:C	1:A:86:ARG:HE	0.93	1.65	18	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:60:LEU:HD23	2:B:63:ASP:HB2	0.93	0.95	19	1
1:A:14:PRO:CG	1:A:36:VAL:HG21	0.93	1.93	16	3
1:A:86:ARG:HH12	1:A:91:VAL:HG11	0.92	1.19	18	1
1:A:60:LEU:HG	2:B:62:ALA:HB1	0.92	1.40	15	1
1:A:86:ARG:NH2	1:A:91:VAL:HG11	0.92	1.71	19	1
2:B:115:LEU:O	2:B:115:LEU:HD23	0.92	1.64	14	4
2:B:162:TYR:HD1	2:B:166:GLU:O	0.92	1.47	6	1
2:B:1:TYR:OH	4:B:250:HEC:CBD	0.92	2.18	11	2
1:A:60:LEU:HD23	2:B:63:ASP:HB3	0.92	1.23	19	1
1:A:86:ARG:HD3	1:A:86:ARG:C	0.92	1.81	3	1
1:A:38:PRO:CD	2:B:62:ALA:HB2	0.92	1.95	20	2
2:B:7:TYR:O	2:B:7:TYR:CD1	0.92	2.23	19	1
1:A:38:PRO:HD3	2:B:119:PRO:C	0.91	1.84	2	1
2:B:162:TYR:OH	2:B:168:SER:CB	0.91	2.19	6	1
2:B:1:TYR:OH	2:B:119:PRO:HG2	0.91	1.66	20	1
2:B:162:TYR:CE1	2:B:168:SER:CA	0.91	2.53	6	2
2:B:59:GLN:HG3	2:B:233:VAL:CG2	0.91	1.96	12	4
2:B:162:TYR:CZ	2:B:168:SER:CA	0.91	2.54	6	1
1:A:86:ARG:HH12	1:A:87:GLY:HA3	0.90	1.25	10	1
1:A:38:PRO:HB2	1:A:60:LEU:HD11	0.90	0.96	15	1
1:A:83:THR:O	1:A:86:ARG:CD	0.90	2.20	11	1
2:B:189:PHE:HD1	2:B:209:PRO:CG	0.90	1.78	15	1
1:A:86:ARG:NE	1:A:86:ARG:CA	0.90	2.30	18	1
2:B:59:GLN:NE2	2:B:158:ARG:HG3	0.90	1.81	4	7
2:B:1:TYR:CZ	2:B:119:PRO:HG3	0.89	2.01	20	1
1:A:38:PRO:N	2:B:1:TYR:OH	0.89	2.06	4	1
1:A:40:ASN:HB3	1:A:60:LEU:CD2	0.89	1.97	16	1
1:A:86:ARG:CG	1:A:86:ARG:HH11	0.89	1.79	1	2
2:B:189:PHE:CG	2:B:209:PRO:HD3	0.88	2.03	3	13
1:A:60:LEU:HD22	2:B:63:ASP:CB	0.88	1.97	19	1
2:B:4:TYR:CD2	2:B:163:PRO:HG3	0.88	2.03	4	3
1:A:83:THR:O	2:B:164:THR:HB	0.88	1.69	16	1
1:A:14:PRO:HG3	2:B:3:PHE:CE2	0.88	2.02	18	3
2:B:115:LEU:HD23	2:B:115:LEU:O	0.88	1.69	10	4
1:A:38:PRO:CD	2:B:1:TYR:CE1	0.88	2.57	4	2
1:A:62:ILE:HG23	2:B:121:PRO:CB	0.87	1.99	13	2
2:B:162:TYR:CG	2:B:163:PRO:CD	0.87	2.57	9	2
2:B:1:TYR:OH	4:B:250:HEC:HBD2	0.87	1.69	11	1
1:A:60:LEU:HD13	2:B:61:GLN:CD	0.87	1.88	19	1
2:B:3:PHE:O	2:B:6:GLN:HG3	0.87	1.70	8	1
1:A:86:ARG:CZ	1:A:87:GLY:N	0.87	2.37	10	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:162:TYR:CD2	2:B:163:PRO:CD	0.86	2.57	9	2
1:A:83:THR:HG21	2:B:62:ALA:CB	0.86	1.99	3	6
2:B:187:ASN:HB2	2:B:189:PHE:CD1	0.86	2.05	18	5
2:B:162:TYR:CE1	2:B:168:SER:N	0.86	2.42	6	1
2:B:162:TYR:CD1	2:B:164:THR:CG2	0.86	2.58	19	1
1:A:83:THR:O	1:A:86:ARG:HD2	0.86	1.69	11	1
1:A:85:HIS:HA	2:B:4:TYR:OH	0.86	1.69	3	3
1:A:86:ARG:NH1	1:A:91:VAL:HG13	0.86	1.86	19	3
1:A:60:LEU:HD11	2:B:61:GLN:CD	0.86	1.89	19	3
2:B:104:VAL:CG1	2:B:115:LEU:CD1	0.85	2.54	17	3
1:A:60:LEU:HG	2:B:61:GLN:CD	0.85	1.90	20	1
1:A:37:GLY:O	2:B:1:TYR:HE1	0.85	1.49	4	1
2:B:189:PHE:CD1	2:B:209:PRO:CG	0.85	2.58	15	6
2:B:1:TYR:CE1	2:B:119:PRO:HG3	0.85	2.06	20	1
2:B:115:LEU:C	2:B:115:LEU:HD23	0.85	1.90	14	10
1:A:38:PRO:HG2	1:A:60:LEU:HD21	0.85	1.47	15	1
1:A:42:ILE:HG13	1:A:83:THR:OG1	0.85	1.71	11	8
1:A:12:TYR:HH	2:B:3:PHE:CB	0.85	1.76	20	1
1:A:83:THR:HG21	2:B:62:ALA:HB2	0.85	1.49	3	3
1:A:38:PRO:HD3	2:B:1:TYR:CZ	0.85	2.06	16	2
1:A:39:HIS:O	1:A:60:LEU:HD12	0.85	1.70	15	1
1:A:87:GLY:CA	2:B:164:THR:CG2	0.84	2.54	3	1
1:A:86:ARG:HE	1:A:86:ARG:HA	0.84	1.23	18	1
1:A:82:CYS:H	1:A:86:ARG:NH2	0.84	1.68	16	1
1:A:62:ILE:HG22	2:B:121:PRO:HB3	0.84	1.49	11	1
2:B:46:LYS:HG2	2:B:129:ILE:HD11	0.84	1.48	13	20
2:B:189:PHE:HD1	2:B:209:PRO:HG3	0.83	1.07	15	1
2:B:86:PRO:HB3	2:B:100:PHE:CE2	0.83	2.08	13	20
2:B:32:GLU:HA	2:B:239:MET:CE	0.83	2.04	13	20
1:A:86:ARG:NH1	2:B:164:THR:HG21	0.83	1.87	12	1
1:A:62:ILE:HG23	2:B:70:ASN:ND2	0.83	1.89	10	2
2:B:192:ASP:HB3	2:B:204:VAL:HG22	0.83	1.48	13	20
1:A:36:VAL:HG13	1:A:36:VAL:O	0.83	1.74	19	6
1:A:86:ARG:CZ	1:A:91:VAL:CG1	0.82	2.57	19	1
2:B:1:TYR:HD2	2:B:4:TYR:HE2	0.82	1.16	9	1
2:B:104:VAL:CG1	2:B:115:LEU:HG	0.82	2.02	4	12
2:B:9:TYR:CD1	2:B:20:VAL:HG11	0.82	2.09	16	20
2:B:4:TYR:CG	2:B:163:PRO:HG3	0.82	2.10	4	1
1:A:12:TYR:O	2:B:3:PHE:HZ	0.82	1.54	16	1
1:A:58:THR:O	2:B:62:ALA:CB	0.82	2.27	18	1
2:B:4:TYR:CD2	2:B:163:PRO:CG	0.82	2.62	4	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:162:TYR:CD1	2:B:164:THR:HG22	0.82	2.10	19	1
1:A:86:ARG:HB3	2:B:164:THR:CG2	0.81	2.05	18	1
2:B:162:TYR:HH	2:B:168:SER:HA	0.81	0.99	6	1
2:B:4:TYR:CE2	2:B:163:PRO:HG3	0.81	2.11	4	1
2:B:162:TYR:CD1	2:B:166:GLU:O	0.81	2.33	6	1
2:B:162:TYR:CZ	2:B:168:SER:CB	0.81	2.64	6	1
2:B:23:ASN:CA	2:B:23:ASN:CG	0.81	2.49	16	1
1:A:60:LEU:CG	2:B:61:GLN:CD	0.81	2.48	20	1
2:B:1:TYR:HD2	2:B:3:PHE:CZ	0.81	1.92	19	1
1:A:60:LEU:HG	2:B:63:ASP:HB2	0.81	1.49	12	1
2:B:189:PHE:CD2	2:B:209:PRO:CD	0.81	2.64	16	17
2:B:83:LEU:HD11	2:B:131:PRO:HD2	0.80	1.49	17	20
2:B:1:TYR:CE1	2:B:4:TYR:CE2	0.80	2.68	11	1
1:A:58:THR:HG1	2:B:63:ASP:HB2	0.80	1.27	8	1
1:A:46:VAL:CG1	1:A:52:ALA:HB2	0.80	2.07	4	20
1:A:14:PRO:HD2	2:B:7:TYR:HE2	0.80	1.36	16	1
1:A:62:ILE:HD12	1:A:62:ILE:H	0.80	1.37	10	2
1:A:37:GLY:CA	2:B:1:TYR:OH	0.80	2.29	4	1
2:B:162:TYR:CB	2:B:164:THR:CG2	0.80	2.59	11	10
2:B:162:TYR:HE1	2:B:167:LEU:C	0.80	1.80	6	1
1:A:58:THR:CG2	2:B:63:ASP:HB3	0.80	1.96	14	2
1:A:40:ASN:HB3	2:B:63:ASP:OD2	0.80	1.77	20	1
2:B:164:THR:CG2	2:B:166:GLU:H	0.80	1.90	15	3
2:B:4:TYR:CZ	2:B:163:PRO:CB	0.79	2.63	4	1
1:A:58:THR:O	2:B:62:ALA:HB3	0.79	1.75	18	1
2:B:162:TYR:CE2	2:B:163:PRO:HD2	0.79	2.12	9	1
1:A:36:VAL:HG22	1:A:36:VAL:O	0.79	1.77	13	6
1:A:62:ILE:HG23	2:B:121:PRO:HB2	0.79	1.51	13	1
1:A:33:MET:SD	1:A:39:HIS:HD2	0.79	2.00	19	16
2:B:170:ASN:CG	2:B:170:ASN:CA	0.79	2.50	4	5
2:B:170:ASN:CA	2:B:170:ASN:CG	0.79	2.50	6	1
1:A:12:TYR:CG	2:B:4:TYR:CE1	0.79	2.70	19	1
2:B:1:TYR:CD1	2:B:119:PRO:HG3	0.79	2.12	18	5
1:A:88:ALA:HB2	2:B:4:TYR:OH	0.79	1.78	12	2
2:B:208:LEU:HD22	2:B:208:LEU:H	0.79	1.37	9	9
2:B:1:TYR:CE2	2:B:119:PRO:CG	0.79	2.65	20	2
1:A:87:GLY:HA3	2:B:164:THR:CG2	0.79	2.00	3	1
1:A:86:ARG:HG2	1:A:86:ARG:HH11	0.78	1.38	10	1
1:A:38:PRO:O	2:B:1:TYR:OH	0.78	2.02	4	1
1:A:60:LEU:HD12	2:B:61:GLN:NE2	0.78	1.91	19	1
1:A:3:VAL:HG21	1:A:21:LEU:HD11	0.78	1.56	4	20

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:97:VAL:HA	2:B:129:ILE:CG2	0.78	2.09	13	20
2:B:104:VAL:HG13	2:B:115:LEU:CD1	0.78	2.07	17	3
2:B:104:VAL:HG13	2:B:115:LEU:CG	0.78	2.08	4	14
1:A:86:ARG:HD2	1:A:87:GLY:N	0.78	1.94	9	1
1:A:60:LEU:HG	2:B:62:ALA:CB	0.78	2.08	15	1
2:B:40:LEU:HB3	2:B:41:PRO:HD2	0.78	1.53	13	20
1:A:81:TYR:HB2	1:A:86:ARG:HH22	0.78	1.38	3	1
1:A:12:TYR:HB3	2:B:4:TYR:CE1	0.78	2.13	19	1
1:A:38:PRO:HD2	2:B:70:ASN:ND2	0.77	1.95	13	1
1:A:58:THR:OG1	2:B:63:ASP:HB3	0.77	1.79	8	1
2:B:189:PHE:CE2	2:B:209:PRO:HD3	0.77	2.14	14	13
1:A:64:PRO:HD3	2:B:121:PRO:HG3	0.77	1.56	11	1
2:B:208:LEU:N	2:B:208:LEU:HD13	0.77	1.94	10	5
1:A:46:VAL:HG11	1:A:78:TYR:CD2	0.77	2.15	5	20
2:B:42:ASP:OD1	2:B:133:LEU:HD11	0.77	1.79	13	20
2:B:107:TYR:HA	2:B:116:LEU:HD11	0.77	1.57	6	2
2:B:1:TYR:CD2	2:B:4:TYR:CG	0.77	2.44	13	1
2:B:1:TYR:H1	2:B:1:TYR:HD1	0.77	1.22	13	2
2:B:187:ASN:HB2	2:B:189:PHE:HD1	0.77	1.36	18	5
1:A:60:LEU:CD2	2:B:63:ASP:CA	0.77	2.58	12	1
1:A:12:TYR:HE2	2:B:3:PHE:O	0.77	1.63	19	1
1:A:12:TYR:HD2	2:B:3:PHE:HE1	0.77	1.19	16	1
1:A:86:ARG:NH2	1:A:91:VAL:HG12	0.77	1.93	19	2
1:A:14:PRO:HG3	2:B:3:PHE:CZ	0.77	2.15	6	1
1:A:82:CYS:H	1:A:86:ARG:HH21	0.77	1.23	16	1
1:A:38:PRO:HD3	2:B:1:TYR:CE1	0.76	2.14	16	2
1:A:62:ILE:HG12	2:B:121:PRO:HB3	0.76	1.58	13	2
1:A:86:ARG:C	1:A:86:ARG:CD	0.76	2.49	9	2
2:B:83:LEU:HD22	2:B:104:VAL:CG1	0.76	2.10	2	20
2:B:158:ARG:HE	4:B:250:HEC:CGD	0.76	1.93	17	9
1:A:60:LEU:HD21	2:B:63:ASP:HA	0.76	1.56	12	1
2:B:208:LEU:N	2:B:208:LEU:HD22	0.76	1.96	3	8
1:A:62:ILE:HD12	2:B:70:ASN:ND2	0.76	1.95	14	2
1:A:24:SER:HA	1:A:97:GLU:OXT	0.76	1.81	1	20
1:A:86:ARG:O	1:A:86:ARG:CD	0.76	2.23	3	3
1:A:38:PRO:HD2	2:B:1:TYR:CZ	0.76	2.16	3	3
2:B:24:CYS:HB2	4:B:250:HEC:HAC	0.75	1.55	20	20
2:B:170:ASN:O	2:B:170:ASN:ND2	0.75	2.18	20	2
2:B:61:GLN:CG	2:B:65:SER:O	0.75	2.31	19	1
1:A:34:ASN:ND2	1:A:35:LYS:HD3	0.75	1.96	13	1
2:B:59:GLN:HB2	2:B:233:VAL:HG21	0.75	1.58	10	18

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:1:TYR:N	2:B:1:TYR:CD1	0.75	2.54	10	1
1:A:38:PRO:CG	2:B:62:ALA:HB2	0.75	2.12	15	1
1:A:60:LEU:HD23	2:B:62:ALA:HB1	0.75	1.58	15	1
1:A:60:LEU:HD21	2:B:61:GLN:NE2	0.74	1.97	20	1
1:A:81:TYR:HB3	1:A:86:ARG:NH2	0.74	1.96	4	2
1:A:37:GLY:O	4:B:250:HEC:O2D	0.74	2.05	20	2
2:B:83:LEU:HD22	2:B:104:VAL:CB	0.74	2.12	5	20
1:A:14:PRO:HD2	2:B:7:TYR:CE2	0.74	2.18	16	1
1:A:37:GLY:O	2:B:119:PRO:HD2	0.74	1.82	2	3
1:A:36:VAL:HG23	2:B:119:PRO:HG2	0.74	1.58	13	1
1:A:62:ILE:HB	2:B:121:PRO:HG3	0.74	1.57	10	1
2:B:162:TYR:O	2:B:162:TYR:CE1	0.74	2.38	19	1
2:B:170:ASN:ND2	2:B:170:ASN:O	0.73	2.19	16	2
1:A:46:VAL:HG13	1:A:52:ALA:CB	0.73	2.13	20	20
2:B:30:THR:CG2	2:B:52:PRO:HG2	0.73	2.13	13	20
2:B:61:GLN:OE1	2:B:65:SER:HB2	0.73	1.84	13	2
2:B:1:TYR:HD1	2:B:119:PRO:HG3	0.73	1.40	18	3
1:A:38:PRO:HD2	2:B:70:ASN:CG	0.73	2.04	13	1
1:A:14:PRO:HB3	1:A:36:VAL:CG1	0.73	2.13	19	11
2:B:24:CYS:SG	4:B:250:HEC:C4C	0.73	2.76	5	20
2:B:208:LEU:HD22	2:B:208:LEU:N	0.73	1.98	13	6
1:A:62:ILE:HD13	2:B:121:PRO:HB2	0.73	1.60	13	2
1:A:36:VAL:HG23	2:B:3:PHE:CG	0.72	2.19	3	2
2:B:75:LEU:HB3	2:B:115:LEU:HD22	0.72	1.60	9	7
1:A:12:TYR:CB	2:B:4:TYR:HE1	0.72	1.96	19	1
1:A:38:PRO:HD3	4:B:250:HEC:O2D	0.72	1.85	20	2
1:A:86:ARG:HH12	1:A:87:GLY:HA2	0.72	1.37	10	1
1:A:86:ARG:CG	1:A:86:ARG:NH1	0.72	2.45	1	2
1:A:60:LEU:CD2	2:B:62:ALA:CB	0.72	2.63	15	1
1:A:36:VAL:HG23	2:B:119:PRO:HD2	0.72	1.61	17	1
1:A:64:PRO:HG3	2:B:102:TYR:CD1	0.72	2.20	2	1
1:A:60:LEU:HG	2:B:61:GLN:CG	0.72	2.15	20	1
1:A:12:TYR:CB	2:B:4:TYR:CE1	0.72	2.72	19	1
2:B:212:GLU:HG2	2:B:229:THR:HG22	0.72	1.62	13	20
1:A:87:GLY:HA3	2:B:162:TYR:HE2	0.72	1.45	17	2
2:B:1:TYR:H3	2:B:1:TYR:HD1	0.72	1.27	11	1
1:A:82:CYS:O	1:A:86:ARG:CZ	0.72	2.38	16	1
2:B:212:GLU:HG2	2:B:229:THR:CG2	0.71	2.14	13	20
2:B:83:LEU:HD22	2:B:104:VAL:HB	0.71	1.61	20	20
2:B:61:GLN:CG	2:B:62:ALA:N	0.71	2.53	16	1
1:A:14:PRO:CB	1:A:36:VAL:HG11	0.71	2.14	19	6

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:162:TYR:CE1	2:B:168:SER:HA	0.71	2.19	6	2
2:B:107:TYR:HD1	2:B:116:LEU:HD21	0.71	1.43	6	1
2:B:24:CYS:CB	4:B:250:HEC:C3C	0.71	2.69	13	20
2:B:120:LEU:HD22	2:B:125:TYR:CE2	0.71	2.21	9	3
1:A:40:ASN:OD1	1:A:42:ILE:CG1	0.71	2.38	20	1
2:B:107:TYR:CD1	2:B:116:LEU:HD21	0.71	2.21	6	1
2:B:7:TYR:HD1	2:B:7:TYR:O	0.71	1.69	19	1
1:A:12:TYR:CD2	2:B:3:PHE:HE1	0.70	2.03	16	1
1:A:81:TYR:HB2	1:A:86:ARG:CZ	0.70	2.16	16	3
2:B:162:TYR:CE1	4:B:250:HEC:CMD	0.70	2.74	12	1
1:A:40:ASN:C	1:A:40:ASN:HD22	0.70	1.90	16	1
1:A:82:CYS:O	1:A:86:ARG:CD	0.70	2.40	16	1
1:A:62:ILE:CG2	2:B:121:PRO:HB2	0.70	2.16	13	1
2:B:83:LEU:HD22	2:B:104:VAL:HG11	0.70	1.63	2	9
1:A:60:LEU:HD12	1:A:62:ILE:HD11	0.70	1.61	4	3
2:B:24:CYS:HB2	4:B:250:HEC:C3C	0.70	2.16	14	20
1:A:37:GLY:O	2:B:119:PRO:HG2	0.70	1.86	11	4
2:B:115:LEU:HD23	2:B:116:LEU:N	0.70	2.02	5	12
1:A:14:PRO:CD	2:B:7:TYR:HE2	0.70	1.99	16	1
2:B:4:TYR:CE1	2:B:163:PRO:HG2	0.70	2.22	3	2
1:A:12:TYR:CZ	2:B:3:PHE:CB	0.70	2.66	20	2
1:A:60:LEU:CG	2:B:61:GLN:NE2	0.70	2.55	20	1
2:B:164:THR:HG22	2:B:166:GLU:N	0.69	1.97	1	1
2:B:164:THR:CG2	2:B:166:GLU:HB2	0.69	2.17	1	1
2:B:187:ASN:O	2:B:189:PHE:CD1	0.69	2.45	20	5
1:A:36:VAL:HG22	1:A:85:HIS:HE2	0.69	1.46	4	1
2:B:61:GLN:HG3	2:B:62:ALA:H	0.69	1.47	16	1
2:B:208:LEU:H	2:B:208:LEU:HD22	0.69	1.47	8	3
1:A:96:VAL:O	1:A:96:VAL:HG12	0.69	1.88	16	9
2:B:164:THR:HG23	2:B:166:GLU:N	0.69	1.97	10	12
2:B:1:TYR:CD2	2:B:119:PRO:HG3	0.69	2.23	16	3
1:A:82:CYS:N	1:A:86:ARG:NH2	0.69	2.41	16	1
1:A:96:VAL:HG12	1:A:96:VAL:O	0.69	1.88	15	11
2:B:1:TYR:H3	2:B:4:TYR:HD2	0.69	1.26	14	2
1:A:86:ARG:HD3	1:A:87:GLY:N	0.69	2.03	12	1
2:B:1:TYR:CE2	2:B:4:TYR:HE2	0.68	2.05	7	1
1:A:38:PRO:CD	2:B:1:TYR:HE1	0.68	2.01	4	1
2:B:62:ALA:HA	2:B:158:ARG:NH2	0.68	2.02	15	7
1:A:12:TYR:OH	2:B:3:PHE:HB3	0.68	1.85	19	1
1:A:86:ARG:HA	1:A:86:ARG:NH1	0.68	2.03	3	1
1:A:33:MET:SD	1:A:39:HIS:CD2	0.68	2.87	19	10

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:14:PRO:CB	1:A:85:HIS:CD2	0.68	2.76	4	1
2:B:1:TYR:OH	4:B:250:HEC:HBD1	0.68	1.87	11	3
2:B:53:TYR:CE2	2:B:69:LEU:HD13	0.68	2.23	10	1
2:B:32:GLU:HA	2:B:239:MET:HE1	0.68	1.65	13	20
2:B:4:TYR:CD1	4:B:250:HEC:HBC2	0.68	2.24	20	1
1:A:38:PRO:HD2	2:B:1:TYR:CE2	0.68	2.24	6	3
2:B:168:SER:HB3	2:B:170:ASN:H	0.67	1.48	14	1
1:A:12:TYR:HD2	2:B:105:THR:HG21	0.67	1.47	13	1
1:A:38:PRO:CG	2:B:62:ALA:CB	0.67	2.72	15	2
1:A:12:TYR:OH	2:B:3:PHE:CG	0.67	2.47	20	1
2:B:1:TYR:HB2	2:B:4:TYR:CD2	0.67	2.25	19	1
2:B:189:PHE:HD2	2:B:209:PRO:HD3	0.67	1.47	13	4
2:B:46:LYS:CG	2:B:129:ILE:HD11	0.67	2.19	13	20
1:A:86:ARG:CZ	1:A:86:ARG:HB2	0.67	2.18	11	1
1:A:86:ARG:HG2	1:A:86:ARG:NH1	0.67	1.98	10	1
2:B:4:TYR:CD1	2:B:163:PRO:CG	0.67	2.77	3	4
2:B:187:ASN:HB2	2:B:189:PHE:CD2	0.67	2.25	15	1
1:A:38:PRO:HD2	2:B:1:TYR:CE1	0.67	2.24	4	2
1:A:9:THR:CG2	1:A:15:LEU:HD11	0.67	2.20	9	8
2:B:7:TYR:C	2:B:7:TYR:CD1	0.67	2.66	19	1
1:A:81:TYR:HB2	1:A:86:ARG:NH1	0.67	2.05	1	2
1:A:39:HIS:O	1:A:60:LEU:HD13	0.67	1.89	15	1
2:B:1:TYR:N	2:B:4:TYR:HD2	0.66	1.87	14	2
1:A:12:TYR:CD2	2:B:4:TYR:CD1	0.66	2.83	19	1
1:A:36:VAL:O	1:A:85:HIS:CE1	0.66	2.47	4	14
1:A:14:PRO:CG	2:B:3:PHE:HE2	0.66	2.00	18	1
1:A:38:PRO:HG2	2:B:62:ALA:CB	0.66	2.20	15	2
1:A:60:LEU:HD22	2:B:63:ASP:HB2	0.66	1.55	19	1
1:A:36:VAL:HA	2:B:119:PRO:HD2	0.66	1.67	13	1
1:A:60:LEU:CD2	2:B:61:GLN:NE2	0.66	2.58	20	1
1:A:62:ILE:HG23	2:B:70:ASN:HD21	0.66	1.49	10	1
2:B:90:ASP:OD1	2:B:93:LEU:HD13	0.66	1.91	13	20
1:A:62:ILE:HG22	2:B:121:PRO:CB	0.66	2.20	11	1
1:A:60:LEU:HG	2:B:63:ASP:CB	0.66	2.10	12	1
2:B:167:LEU:HD22	2:B:167:LEU:N	0.66	2.04	10	8
1:A:82:CYS:O	1:A:86:ARG:HG2	0.66	1.91	16	3
1:A:40:ASN:CG	2:B:63:ASP:OD1	0.66	2.35	20	1
1:A:86:ARG:CD	1:A:86:ARG:C	0.66	2.61	3	1
1:A:60:LEU:CD1	1:A:62:ILE:HD11	0.66	2.21	18	1
1:A:36:VAL:CB	2:B:119:PRO:HD2	0.66	2.21	13	1
2:B:61:GLN:OE1	2:B:65:SER:HB3	0.66	1.91	11	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:60:LEU:CD2	2:B:61:GLN:HB2	0.66	2.21	8	1
2:B:187:ASN:HB2	2:B:191:PHE:CE1	0.65	2.26	1	3
2:B:115:LEU:HD23	2:B:115:LEU:C	0.65	2.12	9	8
2:B:4:TYR:CE1	2:B:163:PRO:HB3	0.65	2.26	4	1
1:A:82:CYS:N	1:A:86:ARG:HH21	0.65	1.89	16	1
1:A:38:PRO:HD3	4:B:250:HEC:CGD	0.65	2.21	15	1
2:B:1:TYR:CE1	4:B:250:HEC:CHA	0.65	2.80	19	3
1:A:62:ILE:CG2	2:B:124:ASP:HB2	0.65	2.22	13	1
2:B:105:THR:HG23	2:B:116:LEU:HB2	0.65	1.69	7	13
2:B:189:PHE:CE1	2:B:209:PRO:CG	0.65	2.77	17	10
1:A:38:PRO:HG2	2:B:62:ALA:H	0.65	1.50	20	1
1:A:84:PRO:HB3	2:B:1:TYR:OH	0.65	1.91	14	2
2:B:75:LEU:HD22	2:B:130:PHE:CD2	0.64	2.27	9	20
1:A:12:TYR:CD2	2:B:105:THR:HG21	0.64	2.27	13	1
1:A:62:ILE:CD1	2:B:70:ASN:ND2	0.64	2.61	14	2
2:B:24:CYS:HA	2:B:161:VAL:HG12	0.64	1.68	15	19
1:A:60:LEU:HB3	2:B:63:ASP:HB2	0.64	1.68	20	1
2:B:24:CYS:CB	4:B:250:HEC:CAC	0.64	2.75	20	20
1:A:81:TYR:HD1	1:A:86:ARG:NE	0.64	1.90	16	1
1:A:88:ALA:HB1	2:B:7:TYR:CE2	0.64	2.27	16	1
2:B:4:TYR:N	2:B:4:TYR:CD1	0.64	2.59	13	2
2:B:103:LEU:HD23	2:B:120:LEU:HD11	0.64	1.70	9	1
1:A:64:PRO:HG3	2:B:102:TYR:CG	0.64	2.28	2	1
1:A:62:ILE:HD13	1:A:63:ALA:N	0.64	2.08	15	1
1:A:61:ALA:HB3	1:A:67:PHE:CZ	0.64	2.27	2	20
2:B:162:TYR:CE1	2:B:167:LEU:C	0.64	2.67	6	1
2:B:97:VAL:HA	2:B:129:ILE:HG21	0.64	1.68	13	20
2:B:1:TYR:CE2	2:B:119:PRO:HG2	0.64	2.24	20	2
2:B:6:GLN:NE2	2:B:116:LEU:HD12	0.64	2.08	19	1
1:A:62:ILE:CG2	2:B:70:ASN:ND2	0.63	2.60	10	3
1:A:36:VAL:CG1	1:A:36:VAL:O	0.63	2.44	19	3
1:A:60:LEU:CD1	2:B:63:ASP:H	0.63	2.05	12	1
1:A:62:ILE:CG2	2:B:121:PRO:HG2	0.63	2.17	17	1
1:A:12:TYR:CE2	2:B:3:PHE:O	0.63	2.50	19	1
2:B:187:ASN:HB2	2:B:191:PHE:HE1	0.63	1.52	1	3
1:A:40:ASN:CB	1:A:60:LEU:CD2	0.63	2.76	16	1
1:A:38:PRO:HB2	1:A:60:LEU:CG	0.63	2.22	15	1
2:B:100:PHE:CE2	2:B:101:TYR:HD2	0.63	2.11	2	9
2:B:192:ASP:OD1	2:B:204:VAL:HG13	0.63	1.93	19	19
1:A:62:ILE:HG21	2:B:61:GLN:HG3	0.63	1.71	15	1
2:B:162:TYR:CD1	2:B:162:TYR:N	0.63	2.67	6	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:58:GLN:OE1	2:B:66:PRO:HB2	0.63	1.94	4	11
1:A:60:LEU:HD13	2:B:61:GLN:CG	0.63	2.23	19	1
2:B:162:TYR:CG	2:B:164:THR:CB	0.63	2.78	19	1
2:B:189:PHE:CE2	2:B:209:PRO:CD	0.63	2.82	17	12
2:B:74:VAL:HG23	2:B:116:LEU:CD2	0.63	2.23	19	2
1:A:60:LEU:CD1	2:B:61:GLN:HG3	0.63	2.24	12	1
2:B:48:VAL:HG13	2:B:127:GLU:CG	0.63	2.23	13	20
2:B:4:TYR:CD1	2:B:163:PRO:HB3	0.63	2.27	20	1
2:B:3:PHE:CE2	2:B:4:TYR:CE2	0.63	2.87	19	1
1:A:7:MET:HB3	1:A:90:MET:HE1	0.62	1.71	19	17
1:A:38:PRO:CD	2:B:1:TYR:CE2	0.62	2.82	18	1
2:B:83:LEU:HD12	2:B:131:PRO:O	0.62	1.94	9	20
2:B:192:ASP:HB3	2:B:204:VAL:CG2	0.62	2.22	13	20
2:B:222:GLU:H	2:B:225:GLN:NE2	0.62	1.92	13	20
2:B:205:THR:HG21	2:B:227:LEU:CD1	0.62	2.24	13	18
1:A:86:ARG:CB	2:B:164:THR:CG2	0.62	2.77	18	1
2:B:208:LEU:HB3	2:B:209:PRO:HD2	0.62	1.72	6	16
2:B:208:LEU:N	2:B:208:LEU:CD1	0.62	2.63	10	2
1:A:60:LEU:HD11	2:B:63:ASP:HB3	0.62	0.64	12	1
1:A:12:TYR:CE2	2:B:3:PHE:CB	0.62	2.82	20	1
2:B:1:TYR:HD2	2:B:3:PHE:CD2	0.62	2.13	20	1
1:A:57:ASN:ND2	1:A:68:TYR:CE2	0.62	2.68	7	1
1:A:37:GLY:O	4:B:250:HEC:O1D	0.62	2.17	20	2
2:B:162:TYR:OH	2:B:168:SER:HB2	0.62	1.92	6	1
1:A:60:LEU:HD13	2:B:61:GLN:HG3	0.62	1.70	12	1
2:B:187:ASN:CB	2:B:189:PHE:CD1	0.62	2.83	18	3
2:B:70:ASN:HB2	4:B:250:HEC:CGA	0.61	2.24	15	16
1:A:62:ILE:HD12	2:B:70:ASN:HD21	0.61	1.53	7	1
2:B:61:GLN:HG3	2:B:62:ALA:N	0.61	2.09	16	1
2:B:8:ASN:ND2	2:B:9:TYR:CE1	0.61	2.68	18	1
2:B:100:PHE:CE2	2:B:101:TYR:HD1	0.61	2.13	4	11
1:A:36:VAL:O	1:A:36:VAL:CG2	0.61	2.48	6	3
2:B:41:PRO:O	2:B:134:SER:HB2	0.61	1.96	13	20
2:B:102:TYR:CD2	2:B:103:LEU:HD12	0.61	2.30	2	2
2:B:61:GLN:CD	2:B:67:SER:HB3	0.61	2.16	19	1
2:B:31:VAL:HG11	2:B:237:GLY:O	0.61	1.95	13	20
1:A:52:ALA:HB3	1:A:53:PRO:HD3	0.61	1.73	12	20
1:A:84:PRO:O	2:B:163:PRO:HG2	0.61	1.95	16	1
1:A:84:PRO:HB2	2:B:162:TYR:CE2	0.61	2.31	15	1
1:A:86:ARG:NH1	1:A:91:VAL:HG11	0.61	1.99	18	1
1:A:12:TYR:HB3	2:B:4:TYR:HE1	0.61	1.45	19	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:62:ILE:CG1	2:B:121:PRO:HB3	0.61	2.25	13	1
2:B:32:GLU:HA	2:B:239:MET:HE2	0.61	1.72	13	20
1:A:9:THR:O	1:A:35:LYS:HD3	0.61	1.96	8	3
1:A:42:ILE:HG13	1:A:83:THR:HG1	0.61	1.55	11	1
2:B:104:VAL:HG13	2:B:115:LEU:HD12	0.61	1.60	17	1
1:A:86:ARG:CZ	1:A:87:GLY:H	0.60	2.07	10	1
1:A:40:ASN:ND2	1:A:42:ILE:HG12	0.60	2.11	16	1
2:B:3:PHE:CE2	2:B:4:TYR:CE1	0.60	2.89	3	2
2:B:170:ASN:N	2:B:170:ASN:CB	0.60	2.61	4	5
1:A:60:LEU:HD21	2:B:61:GLN:CB	0.60	2.25	8	1
2:B:170:ASN:CB	2:B:170:ASN:N	0.60	2.61	1	1
2:B:19:ILE:HG12	2:B:238:GLN:OE1	0.60	1.96	13	20
1:A:9:THR:OG1	1:A:13:ALA:HB3	0.60	1.97	6	15
1:A:38:PRO:CD	2:B:1:TYR:CZ	0.60	2.84	18	2
2:B:170:ASN:CG	2:B:170:ASN:O	0.60	2.40	15	1
1:A:62:ILE:HG23	2:B:70:ASN:OD1	0.60	1.95	11	1
2:B:162:TYR:CD1	2:B:163:PRO:HD2	0.60	2.30	9	1
1:A:84:PRO:HB3	2:B:62:ALA:O	0.60	1.97	19	2
1:A:36:VAL:HG23	2:B:119:PRO:CG	0.60	2.26	13	1
2:B:120:LEU:HD22	2:B:125:TYR:HE2	0.60	1.56	9	1
1:A:36:VAL:O	1:A:36:VAL:HG13	0.59	1.97	15	5
2:B:1:TYR:CD1	2:B:4:TYR:CD2	0.59	2.90	11	1
1:A:12:TYR:CD2	2:B:3:PHE:CE1	0.59	2.88	16	1
1:A:38:PRO:HG2	2:B:62:ALA:HB2	0.59	1.72	15	1
2:B:3:PHE:C	2:B:3:PHE:CD1	0.59	2.74	3	1
1:A:60:LEU:CD2	2:B:63:ASP:N	0.59	2.66	12	1
2:B:86:PRO:HD3	2:B:101:TYR:CE2	0.59	2.32	13	9
2:B:192:ASP:CB	2:B:204:VAL:HG22	0.59	2.26	13	20
2:B:86:PRO:HD3	2:B:101:TYR:CE1	0.59	2.32	4	11
2:B:24:CYS:HA	2:B:161:VAL:CG1	0.59	2.27	4	10
2:B:162:TYR:CE1	2:B:168:SER:HB3	0.59	2.32	2	2
2:B:162:TYR:CD2	2:B:164:THR:HG22	0.59	2.33	9	1
1:A:14:PRO:HB2	1:A:85:HIS:CD2	0.59	2.33	4	1
1:A:87:GLY:HA2	2:B:164:THR:CG2	0.59	2.26	3	1
1:A:37:GLY:HA2	1:A:39:HIS:CD2	0.59	2.33	14	20
1:A:87:GLY:HA3	2:B:162:TYR:CE2	0.59	2.31	17	1
2:B:156:ARG:HD2	2:B:235:GLY:O	0.59	1.97	13	20
2:B:167:LEU:N	2:B:167:LEU:HD22	0.58	2.13	7	8
1:A:83:THR:O	1:A:86:ARG:HG3	0.58	1.97	16	1
1:A:82:CYS:O	1:A:86:ARG:CG	0.58	2.50	16	1
2:B:1:TYR:CE1	2:B:4:TYR:CD2	0.58	2.92	11	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:107:TYR:HA	2:B:116:LEU:CD1	0.58	2.27	1	1
2:B:83:LEU:HD11	2:B:131:PRO:CD	0.58	2.28	17	20
2:B:86:PRO:HG3	2:B:101:TYR:HE2	0.58	1.57	2	9
2:B:59:GLN:HB2	2:B:233:VAL:CG2	0.58	2.28	10	2
2:B:83:LEU:CD2	2:B:104:VAL:HB	0.58	2.29	14	20
2:B:187:ASN:CB	2:B:189:PHE:HD1	0.58	2.11	18	3
1:A:39:HIS:N	1:A:60:LEU:HD11	0.58	2.14	15	1
1:A:83:THR:CG2	2:B:62:ALA:HB2	0.58	2.27	1	1
2:B:1:TYR:CD2	2:B:119:PRO:CG	0.58	2.86	16	2
2:B:86:PRO:HG3	2:B:101:TYR:HE1	0.58	1.57	4	11
2:B:107:TYR:CD1	2:B:116:LEU:HD11	0.58	2.34	19	4
2:B:4:TYR:OH	2:B:162:TYR:HD1	0.58	1.82	20	1
1:A:60:LEU:HG	1:A:60:LEU:O	0.58	1.99	17	2
2:B:4:TYR:CE1	2:B:163:PRO:HG3	0.58	2.34	3	1
1:A:60:LEU:CD1	2:B:61:GLN:HB2	0.58	2.29	11	1
1:A:62:ILE:HD13	1:A:63:ALA:H	0.58	1.57	15	1
2:B:208:LEU:CD2	2:B:208:LEU:N	0.57	2.67	13	1
2:B:1:TYR:N	2:B:1:TYR:HD1	0.57	1.95	10	1
1:A:86:ARG:NH1	1:A:86:ARG:HA	0.57	2.13	16	2
1:A:62:ILE:HD13	2:B:121:PRO:CB	0.57	2.28	13	1
2:B:85:PRO:HG2	2:B:88:ARG:CG	0.57	2.29	13	20
2:B:46:LYS:HD2	2:B:93:LEU:HD23	0.57	1.75	13	20
2:B:113:ASN:CG	2:B:114:ILE:HD12	0.57	2.18	13	20
1:A:64:PRO:HG3	2:B:102:TYR:CE1	0.57	2.34	2	1
1:A:38:PRO:HD2	2:B:62:ALA:CB	0.57	2.14	20	2
1:A:36:VAL:CA	2:B:119:PRO:HD2	0.57	2.29	13	1
2:B:222:GLU:HB3	2:B:225:GLN:HG3	0.57	1.77	13	20
1:A:81:TYR:CD1	1:A:86:ARG:NE	0.57	2.72	16	1
1:A:58:THR:HG22	2:B:63:ASP:OD1	0.57	1.99	19	1
1:A:12:TYR:CE2	2:B:3:PHE:C	0.57	2.78	19	1
1:A:60:LEU:HD11	2:B:63:ASP:CA	0.57	2.25	12	1
1:A:14:PRO:HB3	1:A:36:VAL:CG2	0.57	2.29	6	3
2:B:62:ALA:HA	2:B:158:ARG:HH22	0.57	1.59	15	1
1:A:60:LEU:HD23	1:A:60:LEU:N	0.57	2.14	16	1
1:A:39:HIS:N	1:A:60:LEU:CD1	0.57	2.68	15	1
1:A:60:LEU:O	1:A:60:LEU:HG	0.57	2.00	13	1
1:A:38:PRO:CD	2:B:70:ASN:CG	0.56	2.73	13	1
2:B:85:PRO:HG2	2:B:88:ARG:HG2	0.56	1.75	13	20
2:B:54:ASP:O	2:B:57:ILE:HG22	0.56	1.99	13	20
2:B:97:VAL:HA	2:B:129:ILE:HG23	0.56	1.76	13	20
2:B:105:THR:CG2	2:B:116:LEU:HB2	0.56	2.30	20	5

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:62:ILE:HD11	2:B:61:GLN:NE2	0.56	2.15	12	1
2:B:119:PRO:HB3	4:B:250:HEC:HMA2	0.56	1.77	9	20
1:A:38:PRO:N	2:B:1:TYR:CZ	0.56	2.70	4	1
1:A:86:ARG:HH12	2:B:166:GLU:HB2	0.56	1.60	12	1
1:A:83:THR:CG2	2:B:62:ALA:CB	0.56	2.82	3	2
1:A:84:PRO:HB2	2:B:1:TYR:HE2	0.56	1.60	1	2
1:A:46:VAL:CG1	1:A:78:TYR:CD2	0.56	2.89	1	20
2:B:1:TYR:CD1	2:B:119:PRO:CG	0.56	2.88	18	4
1:A:86:ARG:HA	1:A:86:ARG:CZ	0.56	2.30	3	1
1:A:85:HIS:CD2	2:B:3:PHE:CE2	0.56	2.94	3	1
2:B:100:PHE:CE2	2:B:101:TYR:CD2	0.56	2.93	2	9
2:B:205:THR:HG21	2:B:227:LEU:HD11	0.56	1.78	13	18
1:A:62:ILE:CG2	2:B:121:PRO:HB3	0.56	2.28	11	1
1:A:84:PRO:CB	2:B:162:TYR:CE2	0.56	2.89	15	1
2:B:12:PRO:O	2:B:20:VAL:HG23	0.56	2.00	13	20
2:B:1:TYR:CD2	2:B:3:PHE:CD2	0.56	2.94	20	1
1:A:86:ARG:HG3	2:B:164:THR:HB	0.56	1.75	16	1
2:B:96:GLU:O	2:B:129:ILE:HG21	0.56	1.99	13	20
2:B:4:TYR:OH	2:B:162:TYR:CD1	0.56	2.59	20	1
1:A:86:ARG:CZ	1:A:86:ARG:CB	0.56	2.83	11	1
1:A:58:THR:HG21	2:B:63:ASP:OD2	0.56	2.00	3	1
1:A:62:ILE:CG2	2:B:121:PRO:CB	0.56	2.79	13	2
1:A:86:ARG:HH11	1:A:87:GLY:N	0.56	1.99	9	1
1:A:37:GLY:O	2:B:119:PRO:CD	0.56	2.54	9	2
2:B:59:GLN:HG2	2:B:60:VAL:N	0.56	2.15	16	6
1:A:86:ARG:CZ	1:A:87:GLY:CA	0.56	2.80	10	1
1:A:57:ASN:OD1	1:A:68:TYR:CZ	0.56	2.57	11	1
1:A:38:PRO:HG3	2:B:62:ALA:HB2	0.56	1.76	15	1
1:A:24:SER:CA	1:A:97:GLU:OXT	0.56	2.54	15	20
1:A:36:VAL:HB	2:B:3:PHE:CE2	0.56	2.35	18	1
1:A:38:PRO:N	2:B:1:TYR:CE1	0.55	2.73	4	1
1:A:62:ILE:CD1	1:A:62:ILE:H	0.55	2.06	10	1
1:A:36:VAL:HG23	2:B:3:PHE:CB	0.55	2.32	3	2
2:B:164:THR:HG21	2:B:166:GLU:HB2	0.55	1.77	1	1
1:A:42:ILE:O	1:A:81:TYR:CD1	0.55	2.60	18	1
2:B:24:CYS:CB	4:B:250:HEC:HAC	0.55	2.31	20	20
1:A:14:PRO:CG	2:B:3:PHE:CE2	0.55	2.85	18	1
2:B:97:VAL:CG1	2:B:131:PRO:HD3	0.55	2.31	13	20
1:A:41:VAL:O	1:A:42:ILE:HD13	0.55	2.02	3	9
1:A:42:ILE:HG22	1:A:81:TYR:CZ	0.55	2.37	16	2
1:A:86:ARG:CZ	1:A:91:VAL:HG13	0.55	2.31	18	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:8:ASN:HB3	2:B:9:TYR:CD1	0.55	2.37	18	1
2:B:162:TYR:CE1	2:B:168:SER:CB	0.55	2.89	6	1
1:A:60:LEU:HD13	2:B:63:ASP:H	0.55	1.61	12	1
1:A:58:THR:HG23	2:B:63:ASP:HA	0.55	1.77	18	1
2:B:167:LEU:CD2	2:B:167:LEU:N	0.55	2.69	10	7
1:A:83:THR:HG22	2:B:62:ALA:HB1	0.55	1.77	11	2
2:B:162:TYR:CZ	2:B:168:SER:HB3	0.55	2.35	6	1
2:B:86:PRO:CG	2:B:101:TYR:HE2	0.55	2.15	2	9
2:B:100:PHE:CE2	2:B:101:TYR:CD1	0.55	2.95	4	11
1:A:40:ASN:CB	2:B:63:ASP:OD2	0.55	2.54	20	1
1:A:84:PRO:O	1:A:86:ARG:HG3	0.55	2.00	11	2
2:B:3:PHE:HE2	2:B:4:TYR:CZ	0.55	2.20	3	1
2:B:208:LEU:CD2	2:B:208:LEU:H	0.55	2.13	3	5
1:A:14:PRO:HD3	2:B:3:PHE:CZ	0.55	2.37	18	2
1:A:86:ARG:C	1:A:86:ARG:HD3	0.55	2.10	4	1
2:B:86:PRO:CG	2:B:101:TYR:HE1	0.55	2.15	4	11
1:A:60:LEU:HG	2:B:61:GLN:NE2	0.55	2.13	20	1
1:A:36:VAL:HG23	2:B:3:PHE:HB2	0.55	1.78	14	1
2:B:29:LYS:HD2	2:B:234:GLY:C	0.55	2.21	13	20
2:B:208:LEU:HD13	2:B:208:LEU:N	0.55	2.17	2	2
2:B:1:TYR:CE1	2:B:119:PRO:CG	0.55	2.89	4	2
1:A:14:PRO:HB3	1:A:36:VAL:HG13	0.55	1.79	19	4
1:A:15:LEU:C	1:A:15:LEU:HD12	0.55	2.22	3	2
2:B:75:LEU:HD22	2:B:130:PHE:HD2	0.55	1.62	13	20
1:A:86:ARG:O	1:A:86:ARG:HD2	0.55	2.01	9	1
2:B:162:TYR:HE1	2:B:168:SER:CB	0.55	2.15	2	3
1:A:40:ASN:HD21	1:A:84:PRO:CD	0.55	2.15	20	1
1:A:86:ARG:HB2	2:B:62:ALA:CB	0.54	2.32	13	2
1:A:29:VAL:HG11	1:A:94:ILE:HD13	0.54	1.79	4	20
1:A:40:ASN:OD1	1:A:42:ILE:HG12	0.54	2.02	20	1
2:B:1:TYR:CZ	4:B:250:HEC:HBD1	0.54	2.37	11	2
2:B:118:GLY:HA2	2:B:120:LEU:HG	0.54	1.80	8	3
1:A:32:VAL:HG23	1:A:66:SER:HA	0.54	1.79	11	20
2:B:104:VAL:CG2	2:B:115:LEU:HD11	0.54	2.33	5	12
2:B:98:GLY:H	2:B:129:ILE:HG23	0.54	1.61	13	20
1:A:12:TYR:CE2	2:B:3:PHE:HB3	0.54	2.38	20	1
2:B:115:LEU:CD2	2:B:115:LEU:C	0.54	2.72	7	4
2:B:29:LYS:HD3	2:B:156:ARG:HD3	0.54	1.80	13	20
2:B:187:ASN:O	2:B:189:PHE:HD1	0.54	1.83	20	1
1:A:62:ILE:N	1:A:62:ILE:HD12	0.54	2.11	10	1
1:A:86:ARG:NH2	1:A:91:VAL:HG13	0.54	2.17	18	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:59:GLN:CG	2:B:233:VAL:CG2	0.54	2.79	12	2
2:B:162:TYR:HE1	2:B:168:SER:CA	0.54	2.15	1	1
2:B:40:LEU:O	2:B:43:THR:HG22	0.54	2.03	13	20
2:B:53:TYR:CE2	2:B:55:LEU:HD13	0.54	2.38	13	20
2:B:189:PHE:CZ	2:B:209:PRO:HG3	0.54	2.38	4	3
1:A:84:PRO:CG	2:B:62:ALA:HB1	0.54	2.33	19	2
2:B:59:GLN:CG	2:B:233:VAL:HG22	0.54	2.28	15	1
1:A:14:PRO:CB	1:A:36:VAL:CG1	0.54	2.81	19	1
2:B:161:VAL:HG22	2:B:162:TYR:N	0.53	2.17	13	6
2:B:203:VAL:HG22	2:B:204:VAL:N	0.53	2.18	13	20
1:A:64:PRO:HD3	2:B:121:PRO:CG	0.53	2.31	11	1
2:B:162:TYR:HH	2:B:168:SER:CA	0.53	1.88	6	1
2:B:90:ASP:CG	2:B:93:LEU:HD13	0.53	2.23	13	20
1:A:86:ARG:NH1	2:B:162:TYR:CE2	0.53	2.75	9	1
1:A:42:ILE:CG1	1:A:83:THR:OG1	0.53	2.53	11	1
1:A:40:ASN:ND2	1:A:40:ASN:C	0.53	2.58	16	1
2:B:173:PHE:H	2:B:228:THR:CG2	0.53	2.17	13	20
2:B:4:TYR:CZ	2:B:163:PRO:HG3	0.53	2.27	4	1
1:A:60:LEU:CD1	2:B:63:ASP:N	0.53	2.71	12	1
1:A:85:HIS:N	1:A:85:HIS:CD2	0.53	2.75	10	2
1:A:36:VAL:CG2	2:B:3:PHE:CG	0.53	2.90	3	1
2:B:160:GLN:HE21	2:B:170:ASN:HD22	0.53	1.47	18	1
1:A:38:PRO:CD	4:B:250:HEC:O2D	0.53	2.56	20	2
2:B:177:ILE:HG22	2:B:203:VAL:HG11	0.53	1.80	13	20
2:B:197:PRO:HD2	2:B:201:ASP:O	0.53	2.03	13	20
1:A:9:THR:HG21	1:A:15:LEU:HD11	0.53	1.80	9	6
1:A:80:PHE:N	1:A:80:PHE:CD1	0.53	2.77	19	8
1:A:62:ILE:CD1	2:B:120:LEU:HA	0.53	2.22	2	1
1:A:38:PRO:CD	2:B:62:ALA:CB	0.53	2.81	20	2
2:B:51:VAL:HG13	2:B:51:VAL:O	0.53	2.04	13	6
1:A:80:PHE:CD1	1:A:80:PHE:N	0.53	2.77	18	12
2:B:51:VAL:O	2:B:51:VAL:HG13	0.53	2.04	9	14
2:B:3:PHE:CE2	2:B:4:TYR:CZ	0.53	2.96	3	1
1:A:36:VAL:HB	2:B:3:PHE:CD2	0.53	2.38	18	1
2:B:3:PHE:HE2	2:B:4:TYR:CE1	0.53	2.22	6	1
2:B:29:LYS:O	2:B:237:GLY:HA3	0.53	2.03	13	20
1:A:35:LYS:O	1:A:36:VAL:HG12	0.53	2.04	15	11
2:B:187:ASN:CB	2:B:189:PHE:CE2	0.53	2.92	15	1
2:B:67:SER:OG	2:B:68:GLY:N	0.52	2.42	6	3
2:B:193:VAL:HB	2:B:205:THR:HG23	0.52	1.80	19	2
1:A:84:PRO:CB	2:B:1:TYR:OH	0.52	2.56	10	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:58:THR:O	2:B:62:ALA:HB1	0.52	2.02	18	1
2:B:208:LEU:H	2:B:208:LEU:CD2	0.52	2.16	4	1
2:B:3:PHE:C	2:B:6:GLN:HG3	0.52	2.24	8	1
1:A:12:TYR:CG	2:B:4:TYR:CD1	0.52	2.98	19	1
2:B:3:PHE:CD2	2:B:4:TYR:CE2	0.52	2.97	19	1
1:A:52:ALA:N	1:A:53:PRO:CD	0.52	2.73	4	20
1:A:60:LEU:HD22	2:B:61:GLN:HB2	0.52	1.81	8	1
2:B:69:LEU:HD21	2:B:233:VAL:HG23	0.52	1.80	8	3
1:A:86:ARG:NH1	1:A:87:GLY:HA3	0.52	1.95	10	1
2:B:193:VAL:HB	2:B:205:THR:CG2	0.52	2.35	13	18
2:B:182:ALA:HB3	2:B:194:THR:CG2	0.52	2.35	13	20
1:A:86:ARG:HG3	1:A:86:ARG:HH11	0.52	1.65	20	1
1:A:86:ARG:HD3	1:A:86:ARG:O	0.52	2.05	19	1
2:B:4:TYR:CD1	2:B:163:PRO:CB	0.52	2.56	20	1
1:A:38:PRO:HG2	1:A:60:LEU:CD2	0.52	2.30	15	1
2:B:97:VAL:HG12	2:B:98:GLY:N	0.52	2.20	13	20
1:A:62:ILE:CD1	2:B:70:ASN:HD21	0.52	2.18	11	2
1:A:38:PRO:CD	4:B:250:HEC:O1D	0.52	2.58	15	1
2:B:6:GLN:HE21	2:B:116:LEU:CD1	0.52	2.18	19	1
2:B:70:ASN:ND2	4:B:250:HEC:O2A	0.52	2.42	14	2
2:B:29:LYS:HE2	2:B:233:VAL:O	0.52	2.04	13	20
1:A:42:ILE:HB	1:A:81:TYR:CE1	0.52	2.39	6	1
2:B:40:LEU:HD12	2:B:40:LEU:N	0.51	2.20	13	11
2:B:40:LEU:N	2:B:40:LEU:HD12	0.51	2.20	9	9
2:B:129:ILE:O	2:B:129:ILE:HG23	0.51	2.05	13	8
1:A:6:LYS:CG	1:A:32:VAL:CG1	0.51	2.89	20	20
2:B:129:ILE:HG23	2:B:129:ILE:O	0.51	2.05	4	12
2:B:120:LEU:HD22	2:B:125:TYR:CE1	0.51	2.40	4	1
2:B:9:TYR:CD1	2:B:20:VAL:CG1	0.51	2.91	16	20
2:B:29:LYS:CD	2:B:156:ARG:HD3	0.51	2.36	13	20
2:B:1:TYR:CE2	4:B:250:HEC:HBD1	0.51	2.40	18	2
2:B:158:ARG:HH12	2:B:169:ASN:HD21	0.51	1.49	2	1
2:B:208:LEU:O	2:B:211:PRO:HD2	0.51	2.05	13	7
2:B:19:ILE:H	2:B:238:GLN:NE2	0.51	2.04	13	20
2:B:155:ASN:HB2	2:B:236:PHE:HD1	0.51	1.64	13	20
1:A:36:VAL:O	1:A:85:HIS:HE1	0.51	1.84	4	1
2:B:1:TYR:N	2:B:4:TYR:CD2	0.51	2.70	14	1
2:B:4:TYR:O	2:B:8:ASN:ND2	0.51	2.43	14	1
1:A:57:ASN:HB2	1:A:68:TYR:OH	0.51	2.06	14	8
1:A:85:HIS:HD2	2:B:3:PHE:CE2	0.51	2.23	3	1
1:A:14:PRO:CG	2:B:3:PHE:CZ	0.51	2.92	6	3

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:8:ASN:CG	2:B:9:TYR:CE1	0.51	2.84	18	1
2:B:98:GLY:N	2:B:129:ILE:HG23	0.51	2.21	13	20
1:A:83:THR:HG21	2:B:62:ALA:HB1	0.51	1.83	5	1
1:A:24:SER:CB	1:A:97:GLU:OXT	0.51	2.59	20	20
1:A:96:VAL:CG1	1:A:96:VAL:O	0.51	2.59	12	13
1:A:84:PRO:HG3	2:B:62:ALA:HB1	0.51	1.83	19	2
1:A:96:VAL:O	1:A:96:VAL:CG1	0.51	2.59	7	7
2:B:162:TYR:HB2	2:B:164:THR:OG1	0.51	2.06	3	1
2:B:170:ASN:OD1	2:B:170:ASN:C	0.51	2.46	15	1
2:B:1:TYR:HD1	4:B:250:HEC:C1A	0.51	2.19	3	2
2:B:100:PHE:CD2	2:B:101:TYR:CD2	0.50	2.98	2	9
2:B:115:LEU:O	2:B:115:LEU:CD2	0.50	2.49	14	1
2:B:8:ASN:HB3	2:B:9:TYR:CE1	0.50	2.42	16	17
2:B:182:ALA:HB3	2:B:194:THR:HG23	0.50	1.83	13	20
2:B:1:TYR:HB3	2:B:3:PHE:HD2	0.50	1.64	20	1
2:B:102:TYR:C	2:B:102:TYR:CD1	0.50	2.84	14	1
1:A:83:THR:N	1:A:84:PRO:CD	0.50	2.75	14	20
1:A:38:PRO:HB3	1:A:62:ILE:HD13	0.50	1.82	2	1
1:A:40:ASN:ND2	1:A:42:ILE:CG1	0.50	2.74	16	1
2:B:59:GLN:HE22	2:B:157:GLY:HA2	0.50	1.66	1	2
1:A:62:ILE:HG21	2:B:124:ASP:HB2	0.50	1.84	17	1
1:A:35:LYS:O	1:A:36:VAL:CG1	0.50	2.59	3	15
2:B:222:GLU:H	2:B:225:GLN:HE21	0.50	1.46	13	20
2:B:59:GLN:NE2	2:B:158:ARG:H	0.50	2.04	15	6
1:A:86:ARG:CZ	1:A:86:ARG:O	0.50	2.59	18	1
2:B:1:TYR:HE1	4:B:250:HEC:HBD1	0.50	1.66	16	2
1:A:32:VAL:CG2	1:A:65:GLY:O	0.50	2.60	10	20
2:B:158:ARG:HH12	2:B:169:ASN:ND2	0.50	2.05	2	1
1:A:83:THR:HB	1:A:84:PRO:HD3	0.50	1.84	11	5
2:B:115:LEU:C	2:B:115:LEU:CD2	0.50	2.65	14	3
1:A:38:PRO:CG	2:B:1:TYR:CZ	0.50	2.95	18	1
1:A:83:THR:C	1:A:86:ARG:HG2	0.50	2.23	11	2
2:B:1:TYR:CE1	2:B:119:PRO:CD	0.50	2.95	4	1
1:A:85:HIS:HD2	2:B:3:PHE:HE2	0.50	1.49	3	1
1:A:38:PRO:HG3	1:A:62:ILE:HD12	0.50	1.84	19	1
1:A:62:ILE:CG1	2:B:121:PRO:CB	0.49	2.90	13	1
1:A:62:ILE:HB	2:B:121:PRO:CG	0.49	2.36	10	1
2:B:1:TYR:CD1	4:B:250:HEC:C1A	0.49	2.95	3	1
1:A:86:ARG:HH22	1:A:87:GLY:HA3	0.49	1.66	10	1
1:A:62:ILE:CG2	2:B:119:PRO:O	0.49	2.61	6	2
2:B:61:GLN:NE2	2:B:67:SER:OG	0.49	2.45	11	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:3:PHE:HA	2:B:6:GLN:OE1	0.49	2.07	8	1
1:A:10:ASP:HA	1:A:35:LYS:HE2	0.49	1.83	13	1
1:A:21:LEU:HD12	1:A:22:SER:N	0.49	2.23	10	20
2:B:100:PHE:CD2	2:B:101:TYR:CD1	0.49	3.00	4	11
2:B:167:LEU:N	2:B:167:LEU:CD2	0.49	2.76	7	4
1:A:83:THR:HG22	1:A:84:PRO:CD	0.49	2.38	1	1
1:A:12:TYR:CE2	2:B:3:PHE:HB2	0.49	2.34	19	1
1:A:32:VAL:HG23	1:A:65:GLY:O	0.49	2.07	13	20
1:A:35:LYS:O	1:A:36:VAL:HG22	0.49	2.08	18	1
2:B:59:GLN:HE22	2:B:158:ARG:HG3	0.49	1.66	4	2
1:A:86:ARG:HH22	2:B:166:GLU:CD	0.49	2.11	12	1
1:A:37:GLY:O	2:B:119:PRO:CG	0.49	2.61	10	2
1:A:81:TYR:HB2	1:A:86:ARG:HH12	0.49	1.67	1	1
1:A:36:VAL:HB	2:B:119:PRO:HD2	0.49	1.84	13	1
1:A:40:ASN:HD21	1:A:84:PRO:HD3	0.49	1.66	20	1
1:A:60:LEU:HD12	1:A:62:ILE:CD1	0.49	2.38	18	2
1:A:62:ILE:CD1	2:B:121:PRO:CB	0.48	2.91	13	1
2:B:187:ASN:HB3	2:B:189:PHE:CE2	0.48	2.43	15	1
1:A:83:THR:HG22	1:A:84:PRO:N	0.48	2.23	1	1
2:B:221:VAL:CG2	2:B:225:GLN:HB2	0.48	2.38	13	20
2:B:55:LEU:N	2:B:55:LEU:HD22	0.48	2.23	13	11
2:B:1:TYR:CE1	4:B:250:HEC:HBD1	0.48	2.42	12	2
2:B:1:TYR:CE2	2:B:119:PRO:CD	0.48	2.96	20	1
2:B:102:TYR:CE2	2:B:103:LEU:HD23	0.48	2.43	6	1
2:B:55:LEU:HD22	2:B:55:LEU:N	0.48	2.23	17	9
1:A:84:PRO:HB2	2:B:1:TYR:CE2	0.48	2.41	1	1
2:B:189:PHE:CD2	2:B:209:PRO:HG3	0.48	2.44	19	4
2:B:162:TYR:HE1	2:B:168:SER:HB3	0.48	1.67	2	2
1:A:36:VAL:HG22	1:A:85:HIS:NE2	0.48	2.22	4	1
1:A:86:ARG:NH2	1:A:87:GLY:HA3	0.48	2.24	10	1
1:A:35:LYS:O	1:A:36:VAL:CG2	0.48	2.62	18	1
2:B:156:ARG:HG2	2:B:156:ARG:O	0.48	2.08	13	12
2:B:1:TYR:HD2	2:B:4:TYR:CD2	0.48	2.23	9	1
1:A:14:PRO:CA	1:A:36:VAL:HG11	0.48	2.37	19	9
1:A:58:THR:O	1:A:60:LEU:HD23	0.48	2.08	7	2
2:B:189:PHE:CD2	2:B:209:PRO:CG	0.48	2.96	13	4
2:B:29:LYS:HD2	2:B:235:GLY:N	0.48	2.24	13	20
1:A:12:TYR:OH	2:B:3:PHE:CD2	0.48	2.67	20	1
2:B:61:GLN:NE2	2:B:67:SER:HB3	0.48	2.23	8	2
2:B:160:GLN:HE21	2:B:170:ASN:ND2	0.48	2.06	18	3
1:A:57:ASN:ND2	1:A:68:TYR:CZ	0.48	2.82	7	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:48:VAL:HG13	2:B:127:GLU:HG2	0.48	1.84	13	20
2:B:158:ARG:NE	4:B:250:HEC:O2D	0.48	2.47	17	1
2:B:162:TYR:CZ	4:B:250:HEC:HMD1	0.48	2.44	12	1
2:B:158:ARG:NE	4:B:250:HEC:CGD	0.48	2.71	17	1
1:A:86:ARG:HB2	2:B:62:ALA:HB1	0.47	1.86	13	1
1:A:61:ALA:HB3	1:A:67:PHE:CE1	0.47	2.44	2	3
1:A:85:HIS:HE2	2:B:4:TYR:HE1	0.47	1.51	16	1
1:A:14:PRO:C	1:A:90:MET:SD	0.47	2.92	14	10
1:A:83:THR:HG22	1:A:84:PRO:HD3	0.47	1.86	1	1
2:B:161:VAL:CA	2:B:162:TYR:CD1	0.47	2.96	12	1
2:B:1:TYR:CD1	4:B:250:HEC:CHA	0.47	2.97	19	1
1:A:22:SER:O	1:A:23:ILE:CG2	0.47	2.63	6	20
2:B:226:LEU:HD12	2:B:226:LEU:N	0.47	2.24	13	10
1:A:14:PRO:HB3	1:A:36:VAL:HG11	0.47	1.86	20	5
2:B:226:LEU:N	2:B:226:LEU:HD12	0.47	2.24	5	10
1:A:86:ARG:NH1	1:A:87:GLY:HA2	0.47	2.08	10	1
1:A:38:PRO:HG3	2:B:121:PRO:HB3	0.47	1.86	17	1
1:A:23:ILE:HD12	1:A:27:ASP:HB2	0.47	1.87	16	20
1:A:60:LEU:N	1:A:60:LEU:HD13	0.47	2.24	20	1
1:A:35:LYS:C	1:A:36:VAL:CG1	0.47	2.83	13	3
1:A:83:THR:HG21	2:B:61:GLN:HE21	0.47	1.59	17	1
2:B:195:ILE:O	2:B:197:PRO:HD3	0.47	2.10	13	20
1:A:81:TYR:C	1:A:81:TYR:CD1	0.47	2.88	6	7
2:B:123:GLU:HG2	2:B:124:ASP:N	0.47	2.24	10	1
1:A:60:LEU:HD23	1:A:60:LEU:H	0.47	1.70	7	2
2:B:61:GLN:NE2	2:B:63:ASP:HB3	0.47	2.23	18	1
1:A:80:PHE:CE1	1:A:92:GLY:C	0.47	2.89	9	20
2:B:156:ARG:O	2:B:156:ARG:HG2	0.47	2.10	10	8
1:A:9:THR:OG1	1:A:15:LEU:HD21	0.47	2.10	4	1
2:B:75:LEU:CB	2:B:115:LEU:HD22	0.47	2.36	9	1
2:B:1:TYR:HE1	2:B:4:TYR:CE2	0.47	2.22	11	1
2:B:6:GLN:NE2	2:B:116:LEU:CD1	0.47	2.78	19	1
1:A:88:ALA:CB	2:B:7:TYR:CD2	0.47	2.98	16	1
2:B:62:ALA:CA	2:B:158:ARG:NH2	0.47	2.74	15	1
1:A:29:VAL:HG12	1:A:31:PHE:CE1	0.46	2.46	9	20
2:B:103:LEU:CD2	2:B:120:LEU:HD11	0.46	2.40	9	1
2:B:99:ASP:HB2	2:B:103:LEU:HD12	0.46	1.86	11	1
1:A:86:ARG:CA	1:A:86:ARG:CZ	0.46	2.81	16	1
1:A:83:THR:HG22	2:B:62:ALA:CB	0.46	2.40	11	1
2:B:61:GLN:NE2	2:B:67:SER:HB2	0.46	2.25	13	1
2:B:104:VAL:HG21	2:B:115:LEU:HD11	0.46	1.86	2	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:59:GLN:CG	2:B:60:VAL:N	0.46	2.78	16	3
1:A:60:LEU:CD1	1:A:62:ILE:CD1	0.46	2.93	18	1
2:B:61:GLN:NE2	2:B:67:SER:CB	0.46	2.79	20	2
1:A:44:ASP:O	1:A:45:LYS:CB	0.46	2.64	8	20
2:B:169:ASN:OD1	2:B:169:ASN:N	0.46	2.48	20	1
1:A:23:ILE:O	1:A:97:GLU:N	0.46	2.49	11	20
1:A:83:THR:N	1:A:84:PRO:HD2	0.46	2.26	12	9
2:B:187:ASN:CG	2:B:191:PHE:HE1	0.46	2.13	4	3
1:A:35:LYS:CB	1:A:35:LYS:NZ	0.46	2.79	4	1
2:B:102:TYR:CD2	2:B:103:LEU:HD23	0.46	2.46	4	2
2:B:189:PHE:CD1	2:B:189:PHE:N	0.46	2.84	15	2
1:A:62:ILE:HG21	2:B:70:ASN:CG	0.46	2.31	5	1
1:A:60:LEU:HD11	2:B:61:GLN:HB2	0.46	1.88	11	1
1:A:86:ARG:NH1	2:B:166:GLU:HB2	0.46	2.25	12	1
2:B:70:ASN:HD22	4:B:250:HEC:CGA	0.46	2.23	11	1
1:A:40:ASN:HD22	1:A:60:LEU:HD22	0.46	1.70	3	1
1:A:38:PRO:HD2	2:B:70:ASN:OD1	0.46	2.04	17	1
1:A:23:ILE:N	1:A:95:THR:O	0.46	2.50	13	20
1:A:21:LEU:HD12	1:A:22:SER:H	0.46	1.71	7	20
1:A:5:ILE:N	1:A:30:GLU:O	0.46	2.49	20	20
2:B:198:GLU:CD	2:B:198:GLU:H	0.46	2.14	13	13
2:B:198:GLU:H	2:B:198:GLU:CD	0.46	2.14	9	7
1:A:81:TYR:HB3	1:A:86:ARG:HH22	0.46	1.69	4	1
1:A:86:ARG:NH1	1:A:86:ARG:C	0.46	2.66	10	1
2:B:166:GLU:OE1	2:B:166:GLU:HA	0.46	2.11	15	1
2:B:61:GLN:OE1	2:B:67:SER:HB2	0.46	2.11	15	1
2:B:193:VAL:HB	2:B:205:THR:HG22	0.45	1.87	13	18
1:A:84:PRO:HA	2:B:163:PRO:HD2	0.45	1.88	16	1
1:A:83:THR:CG2	2:B:61:GLN:NE2	0.45	2.62	17	1
2:B:74:VAL:O	2:B:74:VAL:HG13	0.45	2.11	9	15
2:B:162:TYR:CD1	2:B:163:PRO:CD	0.45	2.97	9	1
1:A:39:HIS:CE1	1:A:85:HIS:CE1	0.45	3.04	4	1
2:B:74:VAL:HG13	2:B:74:VAL:O	0.45	2.11	12	5
1:A:42:ILE:O	1:A:81:TYR:CE1	0.45	2.69	18	1
1:A:86:ARG:HD2	1:A:86:ARG:O	0.45	2.11	17	1
2:B:86:PRO:HD3	2:B:101:TYR:CZ	0.45	2.46	13	20
2:B:51:VAL:CG2	2:B:156:ARG:CZ	0.45	2.95	13	20
2:B:59:GLN:HE22	2:B:158:ARG:H	0.45	1.52	20	4
2:B:102:TYR:CD1	2:B:102:TYR:C	0.45	2.89	13	1
1:A:11:LYS:O	1:A:13:ALA:N	0.45	2.50	16	20
1:A:14:PRO:HG2	2:B:3:PHE:CZ	0.45	2.46	3	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:189:PHE:CD1	2:B:209:PRO:HD3	0.45	2.46	3	1
2:B:75:LEU:HB3	2:B:115:LEU:CD2	0.45	2.41	17	1
2:B:70:ASN:N	2:B:70:ASN:OD1	0.45	2.49	5	2
1:A:50:GLU:OE1	1:A:55:LEU:HD12	0.45	2.12	9	20
1:A:58:THR:HG23	2:B:61:GLN:NE2	0.45	2.27	4	1
1:A:61:ALA:HB3	1:A:67:PHE:CE2	0.45	2.45	13	1
2:B:78:PRO:HB2	2:B:81:PHE:CE1	0.45	2.47	13	20
1:A:17:GLU:CG	1:A:18:PRO:HA	0.45	2.42	13	20
1:A:64:PRO:HD3	2:B:102:TYR:CE2	0.45	2.46	2	1
1:A:60:LEU:CG	1:A:60:LEU:O	0.45	2.64	18	1
2:B:208:LEU:N	2:B:208:LEU:CD2	0.45	2.80	18	4
1:A:62:ILE:HD11	2:B:61:GLN:HE21	0.45	1.71	12	1
2:B:3:PHE:HA	2:B:6:GLN:CD	0.45	2.32	8	1
1:A:81:TYR:CD1	1:A:86:ARG:CD	0.45	2.99	16	1
2:B:39:VAL:HG13	2:B:243:ILE:HD11	0.45	1.88	13	20
1:A:86:ARG:HB3	1:A:86:ARG:HH11	0.45	1.72	9	1
1:A:34:ASN:HB3	1:A:35:LYS:HD3	0.45	1.87	16	1
2:B:6:GLN:HE21	2:B:116:LEU:HD12	0.45	1.66	19	1
4:B:250:HEC:HMB1	4:B:250:HEC:HBB3	0.45	1.88	13	9
4:B:250:HEC:HBB3	4:B:250:HEC:HMB1	0.45	1.88	9	11
2:B:189:PHE:CG	2:B:209:PRO:CD	0.45	2.96	2	4
2:B:1:TYR:CD2	2:B:3:PHE:CE2	0.45	3.04	20	2
2:B:23:ASN:CB	2:B:23:ASN:C	0.45	2.76	16	1
1:A:14:PRO:CD	2:B:7:TYR:CE2	0.45	2.89	16	1
1:A:62:ILE:HG13	2:B:70:ASN:OD1	0.45	2.12	14	1
2:B:205:THR:O	2:B:205:THR:HG23	0.45	2.12	13	9
1:A:37:GLY:HA2	2:B:1:TYR:OH	0.45	2.10	4	1
1:A:39:HIS:C	1:A:40:ASN:CG	0.45	2.76	10	5
1:A:60:LEU:HG	2:B:61:GLN:HG3	0.45	1.89	20	1
2:B:205:THR:HG23	2:B:205:THR:O	0.45	2.12	5	9
1:A:35:LYS:C	1:A:36:VAL:HG12	0.45	2.33	3	2
1:A:7:MET:CB	1:A:90:MET:HE1	0.44	2.42	19	3
2:B:61:GLN:HB3	2:B:67:SER:OG	0.44	2.12	11	1
1:A:60:LEU:HD22	4:B:250:HEC:O2D	0.44	2.12	18	1
1:A:5:ILE:HG21	1:A:31:PHE:CE2	0.44	2.48	18	20
1:A:86:ARG:NH1	1:A:86:ARG:HB3	0.44	2.27	9	1
1:A:15:LEU:N	1:A:90:MET:SD	0.44	2.90	14	7
2:B:177:ILE:HG12	2:B:178:ALA:N	0.44	2.28	13	20
2:B:20:VAL:HG12	2:B:20:VAL:O	0.44	2.13	13	11
1:A:69:SER:O	1:A:70:VAL:HG13	0.44	2.13	2	20
2:B:20:VAL:O	2:B:20:VAL:HG12	0.44	2.13	9	9

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:40:ASN:HB3	1:A:60:LEU:HD23	0.44	1.88	11	1
1:A:62:ILE:CD1	1:A:63:ALA:N	0.44	2.80	15	1
1:A:14:PRO:CG	1:A:36:VAL:HG11	0.44	2.41	19	1
2:B:100:PHE:CD2	2:B:101:TYR:N	0.44	2.86	13	20
1:A:40:ASN:ND2	1:A:60:LEU:HD22	0.44	2.27	11	1
1:A:38:PRO:CG	1:A:60:LEU:HD21	0.44	2.33	15	1
1:A:86:ARG:HH21	1:A:91:VAL:CG1	0.44	2.25	15	1
1:A:83:THR:CG2	2:B:62:ALA:HB1	0.44	2.43	3	1
2:B:162:TYR:CB	2:B:164:THR:OG1	0.44	2.66	18	1
2:B:1:TYR:CD1	2:B:119:PRO:HD3	0.44	2.48	4	1
1:A:88:ALA:HB1	2:B:7:TYR:CD2	0.44	2.48	16	1
2:B:1:TYR:HE2	4:B:250:HEC:HBD1	0.44	1.73	18	1
1:A:83:THR:HG21	2:B:61:GLN:CD	0.44	2.31	17	1
2:B:70:ASN:OD1	2:B:70:ASN:N	0.44	2.49	13	1
2:B:48:VAL:CG1	2:B:127:GLU:CG	0.44	2.95	13	20
1:A:6:LYS:HG3	1:A:32:VAL:CG1	0.44	2.43	13	20
1:A:39:HIS:C	1:A:40:ASN:ND2	0.44	2.71	11	2
1:A:86:ARG:NE	1:A:86:ARG:C	0.44	2.42	18	1
2:B:86:PRO:HG3	2:B:101:TYR:CE2	0.44	2.44	13	9
1:A:6:LYS:HG2	1:A:32:VAL:CG1	0.44	2.43	8	20
2:B:86:PRO:HG3	2:B:101:TYR:CE1	0.44	2.44	4	11
1:A:86:ARG:NH2	2:B:166:GLU:CD	0.44	2.71	12	1
1:A:86:ARG:HH22	1:A:91:VAL:HG13	0.44	1.73	18	1
2:B:177:ILE:CG2	2:B:203:VAL:HG11	0.44	2.43	13	20
2:B:1:TYR:HB3	2:B:2:PRO:HD2	0.44	1.90	6	3
1:A:35:LYS:O	1:A:36:VAL:HG13	0.43	2.12	13	2
1:A:12:TYR:HA	1:A:35:LYS:HE3	0.43	1.89	9	1
2:B:187:ASN:O	2:B:189:PHE:CE1	0.43	2.71	12	1
2:B:2:PRO:O	2:B:6:GLN:HG3	0.43	2.13	19	1
1:A:17:GLU:HA	1:A:18:PRO:C	0.43	2.34	9	15
1:A:11:LYS:C	1:A:13:ALA:N	0.43	2.72	8	20
1:A:58:THR:CG2	2:B:63:ASP:HA	0.43	2.42	18	1
2:B:61:GLN:HE21	2:B:63:ASP:H	0.43	1.56	18	1
1:A:60:LEU:HD13	2:B:61:GLN:HE21	0.43	1.67	19	1
2:B:1:TYR:HD2	2:B:3:PHE:CE1	0.43	2.28	19	1
2:B:40:LEU:HB3	2:B:41:PRO:CD	0.43	2.36	13	20
2:B:187:ASN:CB	2:B:189:PHE:CD2	0.43	2.99	15	1
1:A:60:LEU:CD1	2:B:61:GLN:CG	0.43	2.92	19	1
2:B:51:VAL:HG23	2:B:156:ARG:CZ	0.43	2.43	13	20
2:B:114:ILE:N	2:B:114:ILE:HD12	0.43	2.28	13	10
2:B:104:VAL:CG1	2:B:115:LEU:CG	0.43	2.85	4	4

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:114:ILE:HD12	2:B:114:ILE:N	0.43	2.28	4	10
1:A:34:ASN:ND2	1:A:35:LYS:CD	0.43	2.81	10	1
1:A:38:PRO:CG	2:B:119:PRO:HG2	0.43	2.43	14	1
2:B:162:TYR:CD1	4:B:250:HEC:HMD2	0.43	2.49	3	1
1:A:40:ASN:OD1	1:A:42:ILE:CD1	0.43	2.66	20	1
1:A:40:ASN:OD1	1:A:42:ILE:HD11	0.43	2.14	20	1
2:B:69:LEU:N	2:B:69:LEU:HD12	0.43	2.29	10	2
1:A:81:TYR:HB2	1:A:86:ARG:HH21	0.43	0.63	3	1
1:A:14:PRO:HB3	1:A:36:VAL:HG21	0.43	1.90	6	1
2:B:97:VAL:CG1	2:B:98:GLY:N	0.43	2.81	13	20
2:B:104:VAL:HG22	2:B:115:LEU:HD21	0.43	1.89	5	5
1:A:12:TYR:OH	2:B:105:THR:HG21	0.43	2.14	5	1
1:A:86:ARG:NH2	1:A:90:MET:H	0.43	2.12	18	1
1:A:61:ALA:CB	1:A:67:PHE:CE2	0.43	3.02	13	1
1:A:6:LYS:HG3	1:A:32:VAL:HG12	0.43	1.91	18	19
1:A:38:PRO:HB3	1:A:62:ILE:CD1	0.43	2.44	19	1
1:A:34:ASN:CG	1:A:35:LYS:HD3	0.43	2.34	13	1
1:A:36:VAL:HG23	2:B:119:PRO:CD	0.43	2.44	13	1
2:B:8:ASN:CB	2:B:9:TYR:CD1	0.43	3.02	13	12
1:A:22:SER:C	1:A:23:ILE:HG23	0.43	2.35	4	20
1:A:14:PRO:CG	1:A:85:HIS:CD2	0.43	3.02	4	1
1:A:85:HIS:O	1:A:86:ARG:NH2	0.43	2.52	16	1
2:B:6:GLN:HE21	2:B:107:TYR:HA	0.43	1.74	15	1
1:A:14:PRO:HB2	1:A:85:HIS:CG	0.42	2.49	4	1
2:B:71:VAL:CG2	2:B:128:MET:CE	0.42	2.97	20	5
2:B:69:LEU:HD21	2:B:233:VAL:CG2	0.42	2.44	8	1
1:A:36:VAL:O	1:A:36:VAL:HG23	0.42	2.13	18	1
2:B:164:THR:HG23	2:B:165:GLY:N	0.42	2.29	14	1
2:B:161:VAL:CG2	2:B:162:TYR:N	0.42	2.81	11	6
2:B:192:ASP:CB	2:B:204:VAL:CG2	0.42	2.94	13	18
2:B:126:GLN:HA	2:B:126:GLN:OE1	0.42	2.13	13	1
1:A:86:ARG:HA	1:A:86:ARG:HD3	0.42	1.47	19	1
2:B:191:PHE:O	2:B:192:ASP:CG	0.42	2.57	19	1
1:A:12:TYR:CD2	2:B:105:THR:CG2	0.42	3.01	13	1
1:A:38:PRO:HD3	2:B:1:TYR:HE1	0.42	1.73	4	1
2:B:189:PHE:CZ	2:B:209:PRO:CG	0.42	3.03	4	3
1:A:86:ARG:CZ	1:A:87:GLY:HA3	0.42	2.42	10	1
1:A:60:LEU:HD21	2:B:61:GLN:CD	0.42	2.35	7	1
2:B:211:PRO:HA	2:B:231:PRO:HG3	0.42	1.92	17	1
2:B:212:GLU:CG	2:B:229:THR:HG22	0.42	2.41	13	20
2:B:99:ASP:HB2	2:B:103:LEU:CD1	0.42	2.44	11	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:60:LEU:CD1	2:B:63:ASP:CA	0.42	2.92	12	1
1:A:38:PRO:HD2	2:B:1:TYR:CD2	0.42	2.50	18	1
2:B:46:LYS:CD	2:B:93:LEU:HD23	0.42	2.45	13	20
2:B:212:GLU:CG	2:B:229:THR:CG2	0.42	2.95	13	20
2:B:184:ILE:HG22	2:B:193:VAL:HA	0.42	1.92	20	20
1:A:40:ASN:HB2	1:A:42:ILE:HD11	0.42	1.91	7	1
1:A:83:THR:O	2:B:62:ALA:HB2	0.42	2.06	17	1
1:A:29:VAL:HG11	1:A:94:ILE:CD1	0.42	2.45	20	18
2:B:162:TYR:HB2	2:B:164:THR:HG23	0.42	1.89	11	1
2:B:65:SER:OG	2:B:66:PRO:HD2	0.42	2.15	11	1
2:B:162:TYR:CZ	4:B:250:HEC:CMD	0.42	3.02	12	1
2:B:3:PHE:HA	2:B:6:GLN:CG	0.42	2.44	8	1
2:B:1:TYR:CE2	2:B:119:PRO:HG3	0.42	2.48	16	1
2:B:77:LEU:HD11	2:B:132:ILE:HD13	0.42	1.91	13	20
2:B:49:VAL:HG21	2:B:130:PHE:CE2	0.42	2.50	13	1
2:B:93:LEU:N	2:B:93:LEU:HD12	0.42	2.30	13	9
2:B:93:LEU:HD12	2:B:93:LEU:N	0.42	2.30	2	11
2:B:189:PHE:HD1	2:B:209:PRO:CD	0.42	2.25	15	1
1:A:62:ILE:N	1:A:62:ILE:HD13	0.42	2.30	19	1
2:B:191:PHE:C	2:B:192:ASP:CG	0.42	2.76	20	1
1:A:12:TYR:O	2:B:3:PHE:CD1	0.42	2.73	8	1
2:B:8:ASN:ND2	2:B:9:TYR:CZ	0.42	2.88	18	1
2:B:97:VAL:HG11	2:B:131:PRO:CD	0.41	2.45	13	20
1:A:64:PRO:HG3	2:B:102:TYR:CD2	0.41	2.49	2	1
1:A:46:VAL:HG11	1:A:78:TYR:HD2	0.41	1.70	20	4
2:B:162:TYR:HB3	2:B:164:THR:OG1	0.41	2.14	18	1
2:B:158:ARG:NH2	2:B:158:ARG:HB3	0.41	2.30	14	1
1:A:36:VAL:HA	2:B:119:PRO:CD	0.41	2.40	13	1
2:B:118:GLY:HA2	2:B:119:PRO:C	0.41	2.36	13	20
2:B:187:ASN:C	2:B:189:PHE:H	0.41	2.18	13	20
2:B:44:VAL:HA	2:B:132:ILE:O	0.41	2.16	13	20
2:B:3:PHE:O	2:B:3:PHE:CD1	0.41	2.73	3	1
2:B:194:THR:HG23	2:B:194:THR:O	0.41	2.15	13	14
2:B:194:THR:O	2:B:194:THR:HG23	0.41	2.15	9	6
1:A:38:PRO:CD	2:B:119:PRO:C	0.41	2.72	2	1
1:A:14:PRO:HB3	1:A:85:HIS:NE2	0.41	2.30	4	1
2:B:169:ASN:N	2:B:169:ASN:OD1	0.41	2.54	15	3
1:A:41:VAL:C	1:A:42:ILE:HD13	0.41	2.35	7	1
1:A:52:ALA:N	1:A:53:PRO:HD2	0.41	2.31	4	14
2:B:71:VAL:HG23	2:B:128:MET:CE	0.41	2.45	9	1
2:B:189:PHE:CD1	2:B:209:PRO:CD	0.41	3.02	15	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:12:TYR:HB3	2:B:3:PHE:CE1	0.41	2.50	15	1
1:A:10:ASP:HA	1:A:35:LYS:NZ	0.41	2.30	17	1
2:B:74:VAL:HA	2:B:116:LEU:HD23	0.41	1.93	8	1
1:A:61:ALA:CB	1:A:67:PHE:CE1	0.41	3.04	16	1
1:A:86:ARG:NH2	1:A:87:GLY:N	0.41	2.68	10	1
2:B:208:LEU:CB	2:B:209:PRO:HD2	0.41	2.45	10	1
1:A:81:TYR:CD1	1:A:81:TYR:C	0.41	2.93	10	2
2:B:65:SER:OG	2:B:66:PRO:CD	0.41	2.68	11	1
1:A:39:HIS:O	1:A:40:ASN:ND2	0.41	2.53	17	1
2:B:86:PRO:CD	2:B:101:TYR:CE2	0.41	3.03	13	9
2:B:19:ILE:HG12	2:B:238:GLN:CD	0.41	2.36	13	20
2:B:183:ALA:H	2:B:194:THR:HG22	0.41	1.76	13	20
1:A:46:VAL:HG22	1:A:52:ALA:H	0.41	1.76	5	5
2:B:86:PRO:CD	2:B:101:TYR:CE1	0.41	3.03	4	11
2:B:4:TYR:OH	2:B:162:TYR:CA	0.41	2.68	20	1
1:A:83:THR:OG1	2:B:62:ALA:HB1	0.41	2.15	1	1
2:B:59:GLN:HB2	2:B:69:LEU:HD11	0.41	1.91	17	1
2:B:126:GLN:OE1	2:B:126:GLN:HA	0.41	2.14	17	1
2:B:57:ILE:O	2:B:57:ILE:HG23	0.41	2.16	13	8
2:B:108:SER:N	2:B:111:ASP:HB2	0.41	2.31	13	20
2:B:57:ILE:HG23	2:B:57:ILE:O	0.41	2.16	2	12
1:A:86:ARG:HD3	1:A:87:GLY:H	0.41	1.74	12	1
2:B:107:TYR:CA	2:B:116:LEU:HD11	0.41	2.38	1	1
1:A:36:VAL:HB	2:B:4:TYR:OH	0.41	2.15	19	1
2:B:46:LYS:CB	2:B:129:ILE:HD11	0.41	2.44	13	20
1:A:18:PRO:O	1:A:19:LYS:C	0.41	2.60	3	7
2:B:33:ILE:HG23	2:B:33:ILE:O	0.41	2.16	13	10
2:B:18:LYS:NZ	2:B:22:ALA:HB3	0.41	2.31	13	20
1:A:47:PRO:O	1:A:48:ALA:C	0.41	2.60	15	9
1:A:62:ILE:HD13	1:A:62:ILE:HA	0.41	1.73	2	1
2:B:33:ILE:O	2:B:33:ILE:HG23	0.41	2.16	2	10
2:B:4:TYR:CZ	2:B:163:PRO:HB2	0.41	2.47	4	1
1:A:86:ARG:HG3	1:A:87:GLY:N	0.41	2.31	5	1
1:A:86:ARG:NH2	1:A:87:GLY:H	0.41	2.13	10	1
1:A:14:PRO:HD3	2:B:3:PHE:HZ	0.41	1.71	18	1
1:A:12:TYR:HB3	2:B:4:TYR:CD1	0.41	2.48	19	1
1:A:62:ILE:HG12	1:A:62:ILE:H	0.41	1.48	5	1
1:A:21:LEU:HD23	1:A:94:ILE:HG12	0.41	1.93	17	7
1:A:59:LYS:O	1:A:60:LEU:C	0.40	2.60	9	7
2:B:185:GLU:O	2:B:190:GLY:HA2	0.40	2.16	13	20
2:B:3:PHE:CD1	2:B:6:GLN:OE1	0.40	2.74	8	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:186:ASP:HA	2:B:189:PHE:O	0.40	2.16	19	1
1:A:12:TYR:CE2	2:B:105:THR:HG21	0.40	2.51	11	1
1:A:82:CYS:C	1:A:86:ARG:NE	0.40	2.32	16	1
1:A:38:PRO:HD3	2:B:119:PRO:HG3	0.40	1.82	14	1
2:B:192:ASP:OD1	2:B:204:VAL:CG1	0.40	2.68	19	1
2:B:29:LYS:HB2	2:B:156:ARG:NH1	0.40	2.31	13	20
2:B:4:TYR:OH	2:B:162:TYR:CB	0.40	2.69	20	1
2:B:20:VAL:HG13	2:B:23:ASN:HD22	0.40	1.76	13	20
2:B:211:PRO:HB2	2:B:228:THR:OG1	0.40	2.16	20	1
1:A:86:ARG:CZ	1:A:91:VAL:HG11	0.40	2.31	19	1
1:A:9:THR:OG1	1:A:15:LEU:CD2	0.40	2.69	4	1
2:B:8:ASN:N	2:B:8:ASN:HD22	0.40	2.14	16	1
2:B:1:TYR:HE2	2:B:119:PRO:HG2	0.40	1.75	16	1

## 6.3 Torsion angles ⓘ

### 6.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	95/97 (98%)	67±0 (71±0%)	21±0 (22±0%)	7±0 (7±0%)	3	16
2	B	247/249 (99%)	241±0 (98±0%)	5±0 (2±0%)	1±0 (0±0%)	43	81
All	All	6840/6920 (99%)	6160 (90%)	520 (8%)	160 (2%)	12	51

All 8 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	73	GLY	20
2	B	41	PRO	20
1	A	66	SER	20
1	A	60	LEU	20
1	A	45	LYS	20
1	A	84	PRO	20
1	A	67	PHE	20
1	A	12	TYR	20

### 6.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	77/77 (100%)	64±1 (83±2%)	13±1 (17±2%)	6	42
2	B	204/204 (100%)	193±2 (95±1%)	11±2 (5±1%)	32	77
All	All	5620/5620 (100%)	5139 (91%)	481 (9%)	18	63

All 62 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)
2	B	46	LYS	20
1	A	69	SER	20
2	B	28	LYS	20
1	A	74	THR	20
1	A	82	CYS	20
1	A	7	MET	20
1	A	50	GLU	20
1	A	35	LYS	20
2	B	204	VAL	20
1	A	97	GLU	20
2	B	156	ARG	20
1	A	86	ARG	17
1	A	60	LEU	17
1	A	12	TYR	13
2	B	208	LEU	13
2	B	63	ASP	13
1	A	9	THR	12
1	A	40	ASN	12
1	A	83	THR	12
2	B	7	TYR	11
2	B	67	SER	11
2	B	105	THR	11
1	A	62	ILE	9
1	A	57	ASN	9
2	B	115	LEU	8
1	A	42	ILE	7
2	B	189	PHE	5
2	B	164	THR	5

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Mol	Chain	Res	Type	Models (Total)
2	B	103	LEU	5
2	B	61	GLN	4
2	B	119	PRO	4
2	B	66	PRO	4
2	B	65	SER	4
2	B	170	ASN	4
2	B	1	TYR	4
2	B	158	ARG	4
1	A	34	ASN	4
2	B	162	TYR	4
2	B	3	PHE	4
2	B	102	TYR	3
2	B	169	ASN	2
2	B	70	ASN	2
2	B	205	THR	2
2	B	4	TYR	2
1	A	45	LYS	2
1	A	36	VAL	2
2	B	168	SER	1
2	B	99	ASP	1
2	B	166	GLU	1
2	B	192	ASP	1
2	B	8	ASN	1
1	A	59	LYS	1
1	A	58	THR	1
2	B	120	LEU	1
2	B	206	SER	1
2	B	161	VAL	1
1	A	11	LYS	1
2	B	6	GLN	1
2	B	186	ASP	1
2	B	116	LEU	1
1	A	38	PRO	1
2	B	125	TYR	1

### 6.3.3 RNA ⓘ

There are no RNA molecules in this entry.

## 6.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

## 6.5 Carbohydrates

There are no carbohydrates in this entry.

## 6.6 Ligand geometry

Of 2 ligands modelled in this entry, 1 is monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds for which Mogul statistics could be retrieved, the number of bonds that are observed in the model and the number of bonds that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length is the number of standard deviations the observed value is removed from the expected value. A bond length with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond lengths.

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
4	HEC	B	250	2	24,50,50	1.94±0.00	1±0 (4±0%)

In the following table, the Counts columns list the number of angles for which Mogul statistics could be retrieved, the number of angles that are observed in the model and the number of angles that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond angle is the number of standard deviations the observed value is removed from the expected value. A bond angle with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond angles.

Mol	Type	Chain	Res	Link	Bond angles		
					Counts	RMSZ	#Z>2
4	HEC	B	250	2	19,82,82	2.10±0.00	1±0 (5±0%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	HEC	B	250	2	-	0±0,6,54,54	0±0,0,8,8

All unique bond outliers are listed below.

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)	Models	
								Worst	Total
4	B	250	HEC	C3C-C2C	6.29	1.34	1.40	15	20

All unique angle outliers are listed below.

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)	Models	
								Worst	Total
4	B	250	HEC	CBB-CAB-C3B	5.11	116.18	127.34	15	20

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 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

No chemical shift data were provided