Full wwPDB X-ray Structure Validation Report ⓘ

Mar 8, 2023 – 12:44 AM EST

PDB ID	:	2HWD
Title	:	A COMPARISON OF THE ANTI-RHINOVIRAL DRUG BINDING POCKET IN HRV14 AND HRV1A
Authors	:	Kim, K.H.; Rossmann, M.G.
Deposited on	:	1994-01-25
Resolution	:	3.80 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

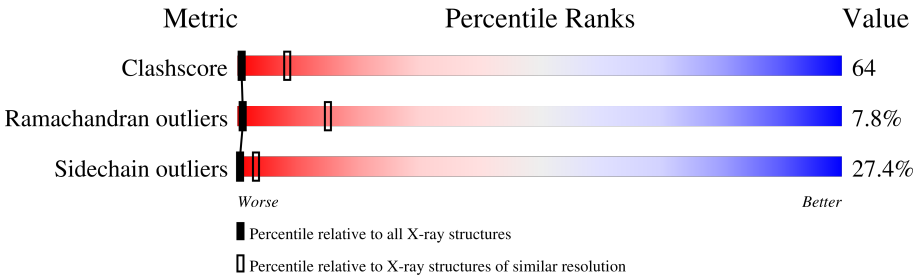
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.32.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1288 (4.00-3.60)
Ramachandran outliers	138981	1243 (4.00-3.60)
Sidechain outliers	138945	1237 (4.00-3.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	1	287	15% 43% 27% 14% .
2	2	263	19% 37% 31% 9% .
3	3	238	20% 45% 26% 8%
4	4	44	9% 16% 9% 9% 57%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	W91	1	700	-	-	X	-

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 6246 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called HUMAN RHINOVIRUS 1A COAT PROTEIN (SUBUNIT VP1).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	1	283	2262	1431	389	430	12	0	0	0

- Molecule 2 is a protein called HUMAN RHINOVIRUS 1A COAT PROTEIN (SUBUNIT VP2).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	2	253	1979	1249	349	371	10	0	0	0

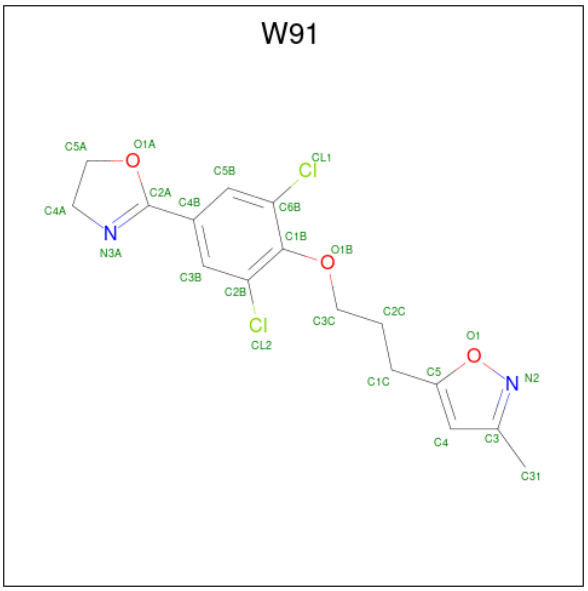
- Molecule 3 is a protein called HUMAN RHINOVIRUS 1A COAT PROTEIN (SUBUNIT VP3).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	3	238	1831	1169	297	348	17	0	0	0

- Molecule 4 is a protein called HUMAN RHINOVIRUS 1A COAT PROTEIN (SUBUNIT VP4).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
4	4	19	151	96	25	30	0	0	0

- Molecule 5 is 5-(3-(2,6-DICHLORO-4-(4,5-DIHYDRO-2-OXAZOLYL)PHENOXY)PROPYL)-3-METHYL ISOXAZOLE (three-letter code: W91) (formula: $C_{16}H_{16}Cl_2N_2O_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
5	1	1	Total	C	Cl	N	O	0	0
			23	16	2	2	3		

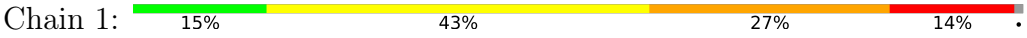
3 Residue-property plots (i)

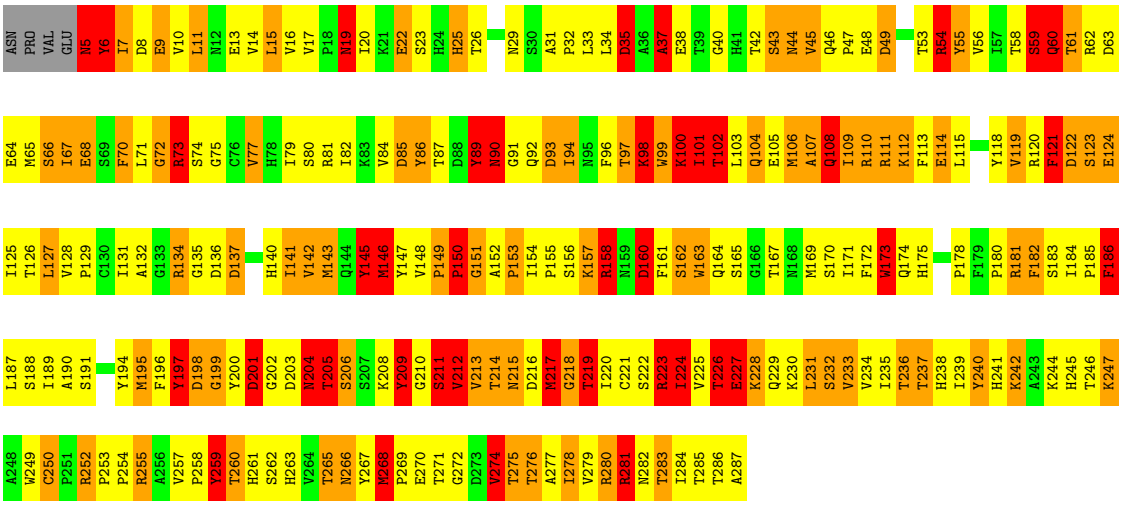
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

Note EDS was not executed.

• Molecule 1: HUMAN RHINOVIRUS 1A COAT PROTEIN (SUBUNIT VP1)

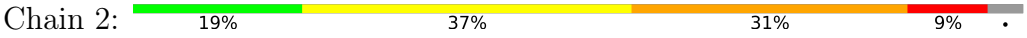
Chain 1:

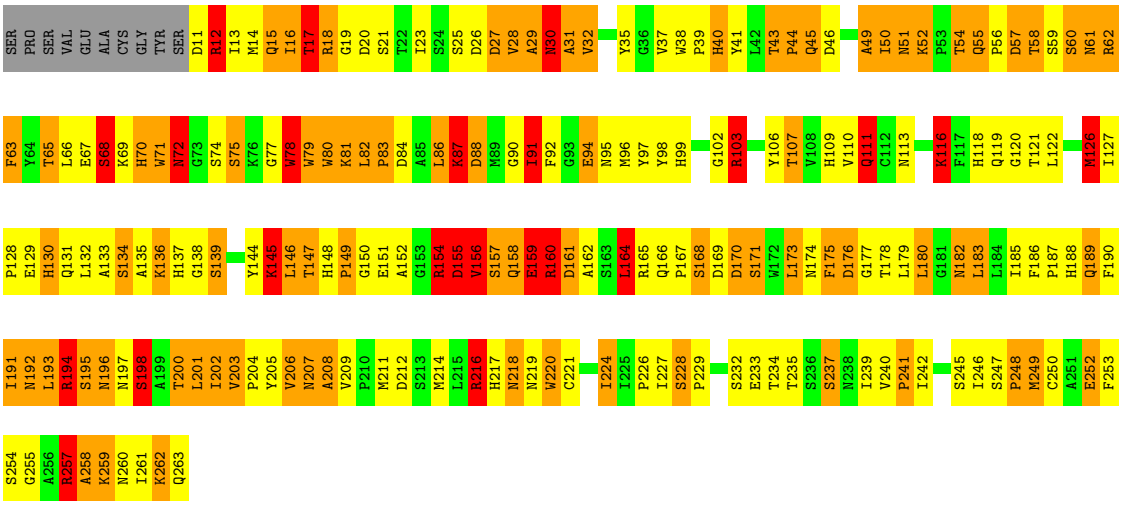




• Molecule 2: HUMAN RHINOVIRUS 1A COAT PROTEIN (SUBUNIT VP2)

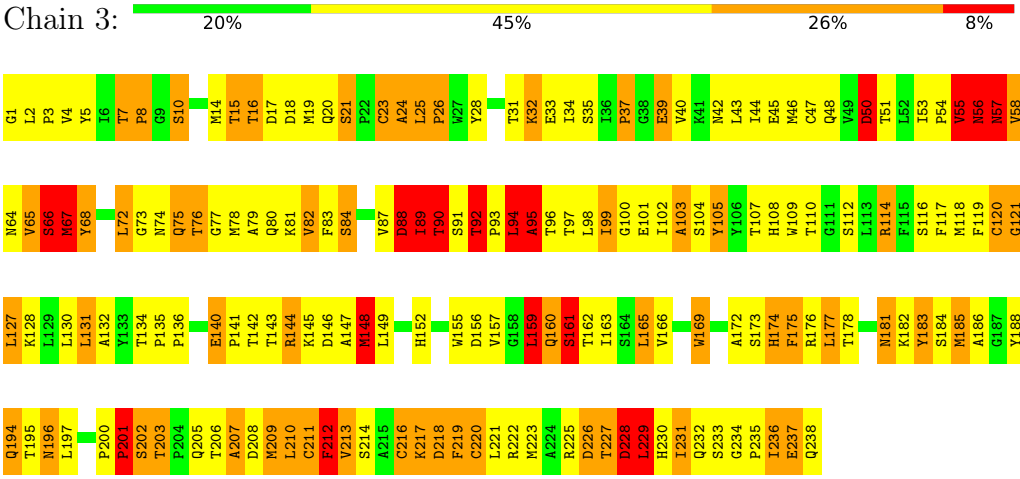
Chain 2:





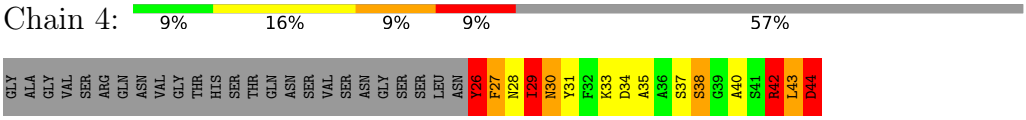
• Molecule 3: HUMAN RHINOVIRUS 1A COAT PROTEIN (SUBUNIT VP3)

Chain 3:



• Molecule 4: HUMAN RHINOVIRUS 1A COAT PROTEIN (SUBUNIT VP4)

Chain 4:



4 Data and refinement statistics (i)

Xtriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 63 2 2	Depositor
Cell constants a, b, c, α, β, γ	341.30Å 341.30Å 465.90Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	(Not available) – 3.80	Depositor
% Data completeness (in resolution range)	(Not available) ((Not available)-3.80)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
Refinement program	unknown	Depositor
R, R_{free}	(Not available) , (Not available)	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	6246	wwPDB-VP
Average B, all atoms (Å^2)	13.0	wwPDB-VP

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: W91

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	1	1.20	9/2322 (0.4%)	2.62	147/3162 (4.6%)
2	2	0.95	0/2033	2.60	151/2770 (5.5%)
3	3	0.93	0/1878	2.47	113/2570 (4.4%)
4	4	1.25	0/154	3.16	21/206 (10.2%)
All	All	1.05	9/6387 (0.1%)	2.58	432/8708 (5.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	1	0	6

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	213	VAL	C-N	11.91	1.61	1.34
1	1	98	LYS	C-N	-8.10	1.15	1.34
1	1	218	GLY	CA-C	-6.92	1.40	1.51
1	1	223	ARG	C-N	6.81	1.49	1.34
1	1	118	TYR	C-N	-6.50	1.19	1.34
1	1	145	TYR	C-N	6.36	1.48	1.34
1	1	146	MET	C-N	-6.09	1.20	1.34
1	1	218	GLY	N-CA	-5.64	1.37	1.46
1	1	149	PRO	N-CA	-5.02	1.38	1.47

All (432) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1	98	LYS	O-C-N	-28.11	77.72	122.70
2	2	62	ARG	CD-NE-CZ	24.79	158.31	123.60
1	1	134	ARG	NE-CZ-NH1	23.98	132.29	120.30
2	2	216	ARG	NE-CZ-NH2	-22.13	109.23	120.30
1	1	280	ARG	NE-CZ-NH2	-20.41	110.09	120.30
3	3	146	ASP	CB-CG-OD2	-17.26	102.77	118.30
1	1	98	LYS	CA-C-N	16.87	154.32	117.20
1	1	150	PRO	C-N-CA	-16.55	87.55	122.30
2	2	257	ARG	NE-CZ-NH2	-16.45	112.07	120.30
3	3	222	ARG	CD-NE-CZ	15.86	145.81	123.60
4	4	42	ARG	NE-CZ-NH1	14.96	127.78	120.30
2	2	155	ASP	CB-CG-OD2	-14.65	105.12	118.30
1	1	81	ARG	NE-CZ-NH1	14.27	127.44	120.30
1	1	281	ARG	NE-CZ-NH2	-14.07	113.27	120.30
1	1	98	LYS	C-N-CA	14.05	156.83	121.70
2	2	154	ARG	NE-CZ-NH1	13.95	127.27	120.30
2	2	62	ARG	NE-CZ-NH1	13.90	127.25	120.30
3	3	226	ASP	CB-CG-OD1	13.84	130.76	118.30
1	1	158	ARG	NE-CZ-NH1	13.70	127.15	120.30
1	1	218	GLY	O-C-N	13.43	144.18	122.70
3	3	228	ASP	CB-CG-OD2	-13.30	106.33	118.30
1	1	146	MET	O-C-N	13.27	143.93	122.70
3	3	28	TYR	CB-CG-CD2	13.27	128.96	121.00
3	3	183	TYR	CB-CG-CD1	12.41	128.45	121.00
3	3	144	ARG	CD-NE-CZ	12.31	140.84	123.60
1	1	227	GLU	OE1-CD-OE2	-12.20	108.66	123.30
1	1	281	ARG	CA-CB-CG	12.19	140.22	113.40
1	1	6	TYR	CB-CG-CD1	-12.02	113.79	121.00
1	1	93	ASP	CB-CG-OD1	-11.86	107.63	118.30
3	3	114	ARG	NE-CZ-NH1	-11.75	114.42	120.30
3	3	144	ARG	NE-CZ-NH1	11.34	125.97	120.30
3	3	225	ARG	NE-CZ-NH1	-11.34	114.63	120.30
3	3	50	ASP	CB-CG-OD2	-11.28	108.15	118.30
1	1	231	LEU	CA-CB-CG	11.28	141.24	115.30
1	1	255	ARG	CD-NE-CZ	10.96	138.94	123.60
3	3	50	ASP	CB-CG-OD1	10.94	128.15	118.30
2	2	67	GLU	OE1-CD-OE2	10.90	136.38	123.30
1	1	54	ARG	CG-CD-NE	10.79	134.47	111.80
2	2	35	TYR	CB-CG-CD2	10.78	127.47	121.00
4	4	44	ASP	CB-CG-OD2	-10.71	108.66	118.30
1	1	211	SER	C-N-CA	-10.60	95.20	121.70
3	3	218	ASP	CB-CG-OD2	-10.40	108.94	118.30
2	2	205	TYR	CB-CG-CD2	10.24	127.14	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	2	12	ARG	CD-NE-CZ	10.21	137.90	123.60
2	2	12	ARG	NE-CZ-NH2	-10.21	115.20	120.30
2	2	162	ALA	CB-CA-C	10.20	125.40	110.10
2	2	62	ARG	NH1-CZ-NH2	-9.96	108.44	119.40
2	2	216	ARG	NE-CZ-NH1	9.90	125.25	120.30
2	2	11	ASP	CB-CG-OD1	9.81	127.13	118.30
2	2	31	ALA	N-CA-CB	9.80	123.83	110.10
1	1	8	ASP	CB-CG-OD2	-9.63	109.63	118.30
3	3	67	MET	N-CA-CB	-9.57	93.37	110.60
2	2	154	ARG	C-N-CA	9.55	145.57	121.70
2	2	29	ALA	N-CA-CB	9.54	123.45	110.10
4	4	42	ARG	CD-NE-CZ	9.49	136.88	123.60
1	1	146	MET	CA-C-N	-9.42	96.47	117.20
2	2	176	ASP	CB-CG-OD2	9.38	126.74	118.30
1	1	281	ARG	NE-CZ-NH1	9.32	124.96	120.30
2	2	212	ASP	CB-CG-OD2	9.27	126.64	118.30
2	2	165	ARG	NE-CZ-NH1	9.21	124.90	120.30
1	1	59	SER	N-CA-CB	-9.15	96.78	110.50
1	1	9	GLU	OE1-CD-OE2	9.14	134.26	123.30
3	3	148	MET	CG-SD-CE	9.04	114.67	100.20
1	1	134	ARG	NH1-CZ-NH2	-9.01	109.48	119.40
2	2	165	ARG	NE-CZ-NH2	-8.99	115.81	120.30
1	1	151	GLY	N-CA-C	-8.96	90.69	113.10
3	3	18	ASP	CB-CG-OD1	-8.95	110.25	118.30
1	1	218	GLY	CA-C-N	-8.91	97.59	117.20
2	2	28	VAL	CA-CB-CG1	8.87	124.21	110.90
1	1	227	GLU	CG-CD-OE1	8.81	135.91	118.30
1	1	60	GLN	O-C-N	8.79	136.76	122.70
2	2	154	ARG	NE-CZ-NH2	-8.74	115.93	120.30
1	1	214	THR	N-CA-CB	8.70	126.83	110.30
3	3	232	GLN	N-CA-CB	8.68	126.23	110.60
1	1	11	LEU	O-C-N	8.64	136.52	122.70
2	2	35	TYR	CB-CG-CD1	-8.64	115.82	121.00
2	2	11	ASP	CB-CG-OD2	-8.63	110.53	118.30
3	3	222	ARG	NE-CZ-NH1	8.60	124.60	120.30
1	1	55	TYR	CB-CG-CD2	-8.55	115.87	121.00
1	1	214	THR	CB-CA-C	-8.53	88.58	111.60
2	2	233	GLU	CG-CD-OE2	8.47	135.25	118.30
1	1	68	GLU	CB-CG-CD	8.38	136.83	114.20
3	3	28	TYR	CB-CG-CD1	-8.31	116.01	121.00
2	2	57	ASP	N-CA-CB	-8.30	95.67	110.60
1	1	187	LEU	CA-C-O	-8.29	102.68	120.10

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	3	226	ASP	OD1-CG-OD2	-8.24	107.63	123.30
2	2	12	ARG	NE-CZ-NH1	8.22	124.41	120.30
2	2	97	TYR	CB-CG-CD2	8.21	125.93	121.00
2	2	126	MET	CA-CB-CG	-8.14	99.47	113.30
2	2	12	ARG	CG-CD-NE	7.98	128.57	111.80
1	1	100	LYS	O-C-N	7.98	135.46	122.70
2	2	241	PRO	C-N-CA	7.93	141.52	121.70
1	1	120	ARG	NE-CZ-NH2	7.92	124.26	120.30
2	2	194	ARG	NE-CZ-NH2	-7.91	116.34	120.30
2	2	160	ARG	NE-CZ-NH1	-7.91	116.35	120.30
1	1	49	ASP	CB-CG-OD1	-7.88	111.21	118.30
2	2	189	GLN	CA-CB-CG	7.83	130.63	113.40
1	1	158	ARG	CD-NE-CZ	7.83	134.56	123.60
2	2	26	ASP	CB-CG-OD2	7.82	125.33	118.30
2	2	161	ASP	N-CA-CB	7.80	124.65	110.60
2	2	61	ASN	CB-CA-C	7.79	125.98	110.40
2	2	94	GLU	OE1-CD-OE2	7.74	132.59	123.30
3	3	235	PRO	C-N-CA	7.73	141.03	121.70
1	1	93	ASP	CB-CG-OD2	7.72	125.25	118.30
3	3	56	ASN	C-N-CA	7.72	140.99	121.70
1	1	55	TYR	CB-CG-CD1	7.70	125.62	121.00
2	2	159	GLU	OE1-CD-OE2	7.67	132.50	123.30
1	1	213	VAL	C-N-CA	-7.65	102.58	121.70
1	1	6	TYR	CB-CG-CD2	7.63	125.58	121.00
1	1	85	ASP	CB-CG-OD1	-7.61	111.45	118.30
1	1	197	TYR	CB-CG-CD2	7.60	125.56	121.00
2	2	71	TRP	CB-CA-C	7.59	125.59	110.40
1	1	134	ARG	CD-NE-CZ	7.59	134.22	123.60
2	2	161	ASP	CB-CG-OD2	-7.56	111.49	118.30
1	1	280	ARG	NH1-CZ-NH2	7.56	127.71	119.40
3	3	207	ALA	O-C-N	7.48	134.67	122.70
2	2	252	GLU	OE1-CD-OE2	7.43	132.22	123.30
3	3	68	TYR	CB-CG-CD2	7.43	125.46	121.00
2	2	232	SER	N-CA-CB	7.43	121.64	110.50
1	1	181	ARG	NE-CZ-NH2	7.43	124.01	120.30
1	1	111	ARG	C-N-CA	7.40	140.20	121.70
4	4	34	ASP	CB-CG-OD1	-7.39	111.65	118.30
1	1	61	THR	CA-CB-OG1	-7.37	93.53	109.00
1	1	89	TYR	CB-CG-CD1	-7.35	116.59	121.00
3	3	92	THR	CB-CA-C	7.34	131.43	111.60
3	3	161	SER	CB-CA-C	-7.33	96.17	110.10
1	1	223	ARG	NE-CZ-NH2	7.31	123.95	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1	73	ARG	NE-CZ-NH1	7.30	123.95	120.30
4	4	37	SER	O-C-N	7.25	134.29	122.70
2	2	147	THR	N-CA-CB	7.22	124.01	110.30
3	3	95	ALA	CA-C-N	7.20	133.03	117.20
2	2	233	GLU	CG-CD-OE1	-7.17	103.97	118.30
1	1	173	TRP	CA-CB-CG	7.15	127.28	113.70
1	1	213	VAL	O-C-N	7.14	134.13	122.70
2	2	152	ALA	N-CA-CB	-7.14	100.11	110.10
1	1	228	LYS	CD-CE-NZ	7.13	128.10	111.70
4	4	40	ALA	O-C-N	7.12	134.09	122.70
3	3	88	ASP	CB-CG-OD2	7.10	124.69	118.30
2	2	237	SER	CB-CA-C	7.10	123.59	110.10
2	2	78	TRP	CA-CB-CG	7.10	127.18	113.70
2	2	164	LEU	O-C-N	7.06	134.00	122.70
3	3	232	GLN	O-C-N	7.06	134.00	122.70
3	3	120	CYS	CA-CB-SG	-7.05	101.31	114.00
2	2	62	ARG	NE-CZ-NH2	7.04	123.82	120.30
3	3	218	ASP	N-CA-CB	-7.04	97.93	110.60
2	2	160	ARG	NE-CZ-NH2	7.00	123.80	120.30
2	2	103	ARG	CD-NE-CZ	6.99	133.38	123.60
2	2	80	TRP	N-CA-CB	6.99	123.17	110.60
1	1	45	VAL	CB-CA-C	6.94	124.59	111.40
1	1	259	TYR	CB-CG-CD2	-6.94	116.83	121.00
3	3	222	ARG	NH1-CZ-NH2	-6.94	111.77	119.40
4	4	31	TYR	CB-CG-CD1	6.93	125.16	121.00
4	4	42	ARG	NH1-CZ-NH2	-6.91	111.80	119.40
1	1	268	MET	CA-CB-CG	-6.89	101.58	113.30
2	2	81	LYS	O-C-N	6.85	133.65	122.70
1	1	164	GLN	OE1-CD-NE2	-6.84	106.16	121.90
2	2	160	ARG	N-CA-CB	-6.82	98.33	110.60
2	2	72	ASN	OD1-CG-ND2	6.81	137.55	121.90
1	1	5	ASN	N-CA-CB	6.80	122.84	110.60
3	3	25	LEU	CA-CB-CG	6.80	130.94	115.30
2	2	106	TYR	C-N-CA	6.77	138.64	121.70
2	2	198	SER	CB-CA-C	-6.75	97.27	110.10
1	1	203	ASP	CB-CG-OD1	-6.74	112.23	118.30
1	1	164	GLN	CG-CD-OE1	6.73	135.06	121.60
3	3	73	GLY	CA-C-O	6.72	132.70	120.60
3	3	26	PRO	O-C-N	6.69	133.41	122.70
1	1	270	GLU	N-CA-CB	6.68	122.62	110.60
2	2	52	LYS	CA-CB-CG	6.67	128.08	113.40
3	3	90	THR	N-CA-CB	6.66	122.95	110.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	3	218	ASP	CA-CB-CG	-6.66	98.75	113.40
3	3	193	TYR	O-C-N	6.64	133.32	122.70
4	4	40	ALA	N-CA-CB	6.62	119.36	110.10
1	1	19	ASN	CB-CG-OD1	-6.61	108.38	121.60
1	1	110	ARG	NE-CZ-NH2	6.61	123.60	120.30
2	2	135	ALA	N-CA-CB	-6.60	100.86	110.10
1	1	102	THR	O-C-N	6.58	133.23	122.70
3	3	57	ASN	CB-CG-ND2	-6.58	100.90	116.70
1	1	70	PHE	O-C-N	6.55	133.18	122.70
1	1	37	ALA	N-CA-CB	-6.55	100.93	110.10
3	3	55	VAL	CB-CA-C	6.53	123.81	111.40
1	1	5	ASN	O-C-N	6.50	133.10	122.70
2	2	196	ASN	N-CA-CB	-6.49	98.93	110.60
2	2	50	ILE	CA-CB-CG2	6.48	123.87	110.90
2	2	16	ILE	O-C-N	6.46	133.04	122.70
2	2	187	PRO	CB-CA-C	6.46	128.15	112.00
2	2	183	LEU	O-C-N	6.45	133.02	122.70
3	3	16	THR	CA-CB-CG2	6.44	121.41	112.40
1	1	213	VAL	CA-C-N	-6.43	103.05	117.20
2	2	28	VAL	CG1-CB-CG2	-6.40	100.66	110.90
1	1	13	GLU	O-C-N	6.38	132.91	122.70
1	1	64	GLU	CA-CB-CG	6.38	127.42	113.40
3	3	222	ARG	NE-CZ-NH2	6.36	123.48	120.30
3	3	172	ALA	CB-CA-C	6.35	119.62	110.10
2	2	68	SER	N-CA-CB	6.34	120.02	110.50
1	1	199	GLY	O-C-N	6.33	132.83	122.70
3	3	160	GLN	N-CA-CB	6.33	122.00	110.60
1	1	201	ASP	CB-CG-OD2	6.32	123.99	118.30
3	3	235	PRO	CA-C-N	-6.32	103.29	117.20
1	1	274	VAL	N-CA-CB	6.31	125.38	111.50
3	3	235	PRO	CA-C-O	6.31	135.34	120.20
4	4	44	ASP	CB-CG-OD1	6.30	123.97	118.30
1	1	275	THR	OG1-CB-CG2	6.30	124.49	110.00
2	2	26	ASP	OD1-CG-OD2	-6.30	111.33	123.30
2	2	196	ASN	OD1-CG-ND2	6.29	136.36	121.90
2	2	248	PRO	N-CA-C	-6.27	95.80	112.10
3	3	37	PRO	N-CA-CB	6.26	110.81	103.30
2	2	161	ASP	O-C-N	6.26	132.71	122.70
1	1	106	MET	CG-SD-CE	6.24	110.18	100.20
3	3	33	GLU	CG-CD-OE2	-6.22	105.87	118.30
1	1	77	VAL	O-C-N	6.21	132.64	122.70
1	1	233	VAL	CA-C-N	-6.21	103.53	117.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1	233	VAL	CB-CA-C	-6.21	99.60	111.40
2	2	19	GLY	C-N-CA	6.21	137.22	121.70
2	2	94	GLU	CG-CD-OE1	-6.21	105.89	118.30
4	4	30	ASN	CB-CA-C	6.20	122.80	110.40
1	1	211	SER	CA-C-O	-6.19	107.11	120.10
1	1	121	PHE	CB-CA-C	-6.18	98.03	110.40
1	1	86	TYR	CB-CA-C	6.18	122.75	110.40
4	4	38	SER	O-C-N	6.17	133.69	123.20
2	2	205	TYR	CB-CG-CD1	-6.15	117.31	121.00
2	2	155	ASP	N-CA-CB	6.15	121.67	110.60
3	3	89	ILE	CB-CA-C	-6.15	99.31	111.60
3	3	94	LEU	CA-C-N	6.15	130.72	117.20
1	1	16	VAL	CG1-CB-CG2	6.14	120.72	110.90
1	1	100	LYS	CA-C-N	-6.13	103.71	117.20
1	1	209	TYR	CB-CG-CD1	6.12	124.67	121.00
1	1	175	HIS	N-CA-CB	-6.12	99.58	110.60
1	1	217	MET	CG-SD-CE	6.10	109.96	100.20
1	1	206	SER	O-C-N	6.09	132.45	122.70
4	4	35	ALA	CB-CA-C	6.09	119.24	110.10
2	2	155	ASP	CB-CG-OD1	6.08	123.77	118.30
3	3	185	MET	CA-CB-CG	6.08	123.63	113.30
2	2	154	ARG	CG-CD-NE	6.07	124.55	111.80
2	2	17	THR	CB-CA-C	6.04	127.91	111.60
2	2	81	LYS	CA-CB-CG	6.04	126.68	113.40
2	2	57	ASP	CB-CG-OD2	-6.04	112.87	118.30
2	2	82	LEU	CA-CB-CG	-6.03	101.43	115.30
1	1	227	GLU	CB-CG-CD	6.03	130.48	114.20
2	2	107	THR	CA-CB-OG1	-6.03	96.34	109.00
1	1	111	ARG	NE-CZ-NH2	6.02	123.31	120.30
2	2	57	ASP	CB-CG-OD1	-6.02	112.88	118.30
3	3	32	LYS	O-C-N	6.01	132.32	122.70
1	1	247	LYS	CB-CA-C	-6.01	98.38	110.40
1	1	187	LEU	CA-C-N	5.99	130.37	117.20
2	2	194	ARG	NH1-CZ-NH2	5.98	125.98	119.40
2	2	262	LYS	CB-CA-C	5.96	122.33	110.40
2	2	160	ARG	CG-CD-NE	5.96	124.31	111.80
1	1	35	ASP	CB-CG-OD2	5.95	123.65	118.30
2	2	130	HIS	CA-CB-CG	-5.95	103.49	113.60
3	3	15	THR	N-CA-CB	-5.95	99.00	110.30
1	1	82	ILE	CB-CA-C	-5.94	99.72	111.60
1	1	71	LEU	CB-CA-C	5.94	121.48	110.20
1	1	68	GLU	OE1-CD-OE2	-5.93	116.18	123.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1	146	MET	CG-SD-CE	5.93	109.69	100.20
3	3	233	SER	CA-C-N	-5.92	104.36	116.20
2	2	87	LYS	CB-CG-CD	5.90	126.95	111.60
4	4	26	TYR	CB-CG-CD1	5.90	124.54	121.00
2	2	208	ALA	N-CA-CB	5.90	118.36	110.10
2	2	156	VAL	C-N-CA	5.90	136.44	121.70
2	2	91	ILE	N-CA-CB	5.89	124.35	110.80
2	2	157	SER	N-CA-CB	5.89	119.33	110.50
1	1	20	ILE	O-C-N	5.89	132.12	122.70
1	1	231	LEU	CB-CA-C	5.88	121.37	110.20
1	1	240	TYR	CB-CG-CD1	-5.87	117.48	121.00
3	3	183	TYR	CB-CG-CD2	-5.87	117.48	121.00
2	2	130	HIS	O-C-N	5.87	132.09	122.70
2	2	49	ALA	CA-C-O	-5.87	107.78	120.10
2	2	252	GLU	CG-CD-OE1	-5.87	106.57	118.30
3	3	68	TYR	CB-CG-CD1	-5.86	117.48	121.00
1	1	89	TYR	CB-CG-CD2	5.84	124.50	121.00
3	3	201	PRO	N-CA-C	5.84	127.28	112.10
2	2	234	THR	CA-C-O	5.83	132.34	120.10
3	3	185	MET	N-CA-CB	5.83	121.09	110.60
2	2	97	TYR	CB-CG-CD1	-5.82	117.51	121.00
3	3	105	TYR	CB-CG-CD2	5.81	124.49	121.00
1	1	55	TYR	O-C-N	5.80	131.99	122.70
1	1	195	MET	CG-SD-CE	5.80	109.49	100.20
1	1	85	ASP	CB-CG-OD2	5.80	123.52	118.30
1	1	54	ARG	NE-CZ-NH1	5.79	123.19	120.30
2	2	249	MET	CA-CB-CG	5.79	123.14	113.30
1	1	49	ASP	OD1-CG-OD2	5.78	134.28	123.30
3	3	24	ALA	N-CA-CB	-5.77	102.03	110.10
2	2	147	THR	O-C-N	5.76	131.92	122.70
1	1	81	ARG	NH1-CZ-NH2	-5.76	113.06	119.40
2	2	57	ASP	OD1-CG-OD2	5.76	134.24	123.30
1	1	25	HIS	O-C-N	5.75	131.91	122.70
1	1	16	VAL	CB-CA-C	5.73	122.29	111.40
1	1	250	CYS	CA-CB-SG	5.72	124.31	114.00
1	1	202	GLY	C-N-CA	5.72	136.00	121.70
1	1	226	THR	N-CA-C	5.72	126.44	111.00
1	1	274	VAL	CA-CB-CG1	5.72	119.47	110.90
2	2	257	ARG	NE-CZ-NH1	5.71	123.16	120.30
2	2	134	SER	CA-C-N	-5.71	104.64	117.20
2	2	218	ASN	CA-CB-CG	5.70	125.94	113.40
3	3	103	ALA	CB-CA-C	5.68	118.62	110.10

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1	90	ASN	CB-CA-C	5.68	121.75	110.40
1	1	232	SER	CB-CA-C	-5.67	99.32	110.10
3	3	45	GLU	OE1-CD-OE2	-5.67	116.50	123.30
2	2	139	SER	N-CA-CB	-5.65	102.02	110.50
3	3	229	LEU	CA-CB-CG	5.65	128.29	115.30
1	1	204	ASN	CA-C-N	-5.64	104.78	117.20
2	2	249	MET	CG-SD-CE	5.64	109.22	100.20
2	2	83	PRO	C-N-CA	5.64	135.79	121.70
3	3	77	GLY	CA-C-O	5.64	130.75	120.60
3	3	76	THR	O-C-N	5.63	132.78	123.20
3	3	227	THR	CA-C-O	5.63	131.93	120.10
3	3	160	GLN	O-C-N	5.62	131.70	122.70
3	3	18	ASP	OD1-CG-OD2	5.62	133.98	123.30
3	3	212	PHE	CA-CB-CG	5.62	127.38	113.90
1	1	198	ASP	CB-CG-OD2	5.62	123.36	118.30
2	2	212	ASP	CB-CG-OD1	-5.60	113.26	118.30
2	2	49	ALA	CA-C-N	5.60	129.51	117.20
2	2	26	ASP	CB-CG-OD1	5.59	123.33	118.30
3	3	146	ASP	CB-CG-OD1	5.59	123.33	118.30
2	2	220	TRP	CA-C-N	-5.59	104.91	117.20
2	2	134	SER	N-CA-CB	5.57	118.86	110.50
1	1	274	VAL	CA-C-N	-5.56	104.96	117.20
3	3	79	ALA	O-C-N	5.56	131.60	122.70
3	3	146	ASP	OD1-CG-OD2	5.56	133.87	123.30
2	2	228	SER	N-CA-CB	5.56	118.84	110.50
2	2	116	LYS	CB-CA-C	-5.55	99.29	110.40
1	1	62	ARG	NE-CZ-NH1	-5.55	117.52	120.30
2	2	83	PRO	CB-CA-C	5.54	125.86	112.00
1	1	68	GLU	CA-CB-CG	5.53	125.57	113.40
2	2	119	GLN	CB-CA-C	5.53	121.45	110.40
1	1	153	PRO	N-CD-CG	-5.52	94.92	103.20
2	2	149	PRO	CA-C-N	5.52	127.23	116.20
3	3	24	ALA	CA-C-N	5.51	129.33	117.20
3	3	64	ASN	OD1-CG-ND2	5.51	134.58	121.90
3	3	183	TYR	CG-CD2-CE2	5.49	125.69	121.30
1	1	260	THR	CA-C-O	-5.49	108.57	120.10
2	2	54	THR	N-CA-CB	5.48	120.72	110.30
1	1	101	ILE	N-CA-CB	-5.47	98.22	110.80
2	2	216	ARG	NH1-CZ-NH2	5.46	125.41	119.40
2	2	169	ASP	CA-C-O	5.46	131.56	120.10
2	2	32	VAL	O-C-N	5.44	131.41	122.70
1	1	81	ARG	CD-NE-CZ	5.44	131.21	123.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	2	90	GLY	CA-C-O	5.43	130.38	120.60
4	4	40	ALA	N-CA-C	-5.42	96.35	111.00
3	3	225	ARG	NE-CZ-NH2	5.42	123.01	120.30
3	3	58	VAL	CA-CB-CG1	-5.41	102.78	110.90
3	3	218	ASP	C-N-CA	5.41	135.23	121.70
2	2	20	ASP	CB-CG-OD2	-5.41	113.43	118.30
2	2	150	GLY	O-C-N	5.41	131.35	122.70
3	3	169	TRP	CB-CA-C	5.40	121.20	110.40
3	3	228	ASP	CB-CA-C	-5.40	99.61	110.40
3	3	234	GLY	N-CA-C	-5.40	99.61	113.10
2	2	70	HIS	CB-CA-C	-5.39	99.62	110.40
4	4	26	TYR	CB-CG-CD2	-5.39	117.77	121.00
1	1	270	GLU	O-C-N	5.39	131.32	122.70
2	2	194	ARG	NE-CZ-NH1	-5.38	117.61	120.30
3	3	8	PRO	C-N-CA	5.38	133.59	122.30
3	3	235	PRO	CB-CA-C	-5.38	98.56	112.00
3	3	95	ALA	CA-C-O	-5.36	108.84	120.10
3	3	175	PHE	CB-CG-CD1	-5.34	117.06	120.80
4	4	44	ASP	CA-C-O	5.34	131.31	120.10
1	1	172	PHE	CA-C-O	-5.33	108.90	120.10
2	2	87	LYS	CB-CA-C	5.33	121.07	110.40
2	2	165	ARG	C-N-CA	5.33	135.03	121.70
3	3	206	THR	N-CA-C	-5.33	96.61	111.00
3	3	203	THR	O-C-N	5.32	131.21	121.10
2	2	150	GLY	CA-C-O	-5.32	111.02	120.60
2	2	111	GLN	CB-CG-CD	5.32	125.43	111.60
2	2	96	MET	CA-C-N	-5.32	105.50	117.20
3	3	88	ASP	OD1-CG-OD2	-5.32	113.20	123.30
3	3	206	THR	OG1-CB-CG2	5.32	122.23	110.00
3	3	237	GLU	OE1-CD-OE2	5.31	129.67	123.30
2	2	161	ASP	CB-CA-C	-5.31	99.78	110.40
3	3	233	SER	CA-C-O	5.30	131.23	120.10
1	1	283	THR	O-C-N	5.30	131.18	122.70
4	4	29	ILE	O-C-N	5.29	131.17	122.70
3	3	202	SER	CA-C-N	-5.29	105.56	117.20
2	2	195	SER	CB-CA-C	5.29	120.15	110.10
2	2	182	ASN	O-C-N	5.28	131.15	122.70
3	3	114	ARG	NE-CZ-NH2	5.28	122.94	120.30
1	1	201	ASP	CB-CG-OD1	-5.28	113.55	118.30
2	2	52	LYS	CG-CD-CE	5.28	127.73	111.90
3	3	108	HIS	CA-CB-CG	5.26	122.55	113.60
1	1	102	THR	CB-CA-C	-5.25	97.42	111.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	3	35	SER	N-CA-CB	-5.25	102.63	110.50
2	2	82	LEU	N-CA-C	5.24	125.13	111.00
1	1	287	ALA	CA-C-O	-5.23	109.11	120.10
1	1	211	SER	O-C-N	5.23	131.06	122.70
3	3	10	SER	CB-CA-C	5.23	120.03	110.10
2	2	203	VAL	N-CA-CB	-5.22	100.01	111.50
1	1	224	ILE	CB-CG1-CD1	-5.22	99.29	113.90
3	3	64	ASN	N-CA-CB	-5.22	101.21	110.60
2	2	11	ASP	O-C-N	5.22	131.05	122.70
1	1	242	LYS	CA-C-N	-5.20	105.75	117.20
3	3	165	LEU	O-C-N	5.20	131.01	122.70
3	3	92	THR	N-CA-C	-5.19	96.99	111.00
1	1	102	THR	CA-C-N	-5.18	105.81	117.20
2	2	12	ARG	CB-CA-C	-5.18	100.04	110.40
2	2	30	ASN	N-CA-CB	-5.17	101.29	110.60
3	3	146	ASP	N-CA-CB	5.17	119.90	110.60
1	1	22	GLU	CG-CD-OE2	5.16	128.62	118.30
2	2	19	GLY	CA-C-N	-5.16	105.85	117.20
4	4	26	TYR	O-C-N	5.16	130.95	122.70
2	2	173	LEU	CB-CA-C	5.15	119.99	110.20
3	3	156	ASP	CB-CG-OD1	-5.15	113.66	118.30
3	3	76	THR	CA-C-N	-5.15	105.91	116.20
1	1	158	ARG	NH1-CZ-NH2	-5.14	113.74	119.40
3	3	24	ALA	CA-C-O	-5.14	109.31	120.10
4	4	38	SER	CA-C-O	-5.14	109.31	120.10
3	3	181	ASN	O-C-N	5.13	130.90	122.70
2	2	237	SER	CA-C-O	5.12	130.86	120.10
1	1	43	SER	CA-C-N	-5.11	105.96	117.20
3	3	72	LEU	CB-CG-CD2	-5.11	102.32	111.00
1	1	94	ILE	CA-C-N	-5.09	105.99	117.20
1	1	163	TRP	CB-CA-C	5.09	120.59	110.40
4	4	42	ARG	C-N-CA	-5.09	108.97	121.70
1	1	66	SER	O-C-N	5.08	130.84	122.70
1	1	205	THR	OG1-CB-CG2	5.08	121.68	110.00
2	2	28	VAL	CB-CA-C	-5.08	101.75	111.40
2	2	50	ILE	CB-CA-C	5.08	121.75	111.60
1	1	178	PRO	CA-C-N	-5.07	106.04	117.20
3	3	78	MET	CB-CA-C	5.07	120.54	110.40
1	1	189	ILE	C-N-CA	5.07	134.37	121.70
2	2	40	HIS	CA-CB-CG	-5.07	104.99	113.60
3	3	64	ASN	CA-CB-CG	-5.05	102.28	113.40
2	2	168	SER	C-N-CA	5.05	134.33	121.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	3	57	ASN	N-CA-CB	-5.04	101.52	110.60
2	2	218	ASN	CB-CG-OD1	-5.04	111.53	121.60
2	2	45	GLN	N-CA-CB	5.04	119.67	110.60
3	3	131	LEU	CA-CB-CG	5.03	126.88	115.30
3	3	227	THR	CA-CB-CG2	-5.03	105.36	112.40
1	1	204	ASN	N-CA-CB	5.03	119.65	110.60
3	3	223	MET	CG-SD-CE	5.03	108.24	100.20
3	3	237	GLU	CA-C-O	5.02	130.65	120.10
1	1	175	HIS	CB-CA-C	5.02	120.44	110.40
2	2	79	TRP	CA-CB-CG	5.00	123.20	113.70
3	3	218	ASP	OD1-CG-OD2	5.00	132.80	123.30

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1	150	PRO	Peptide
1	1	186	PHE	Mainchain
1	1	211	SER	Mainchain
1	1	223	ARG	Mainchain
1	1	98	LYS	Mainchain,Peptide

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	2262	0	2189	421	1
2	2	1979	0	1920	213	2
3	3	1831	0	1809	235	1
4	4	151	0	136	18	0
5	1	23	0	16	8	0
All	All	6246	0	6070	790	2

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 64.

All (790) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:154:ILE:HG23	1:1:221:CYS:SG	1.54	1.45
1:1:101:ILE:H	1:1:101:ILE:CD1	1.12	1.39
1:1:100:LYS:HA	1:1:101:ILE:CD1	1.64	1.25
1:1:108:GLN:NE2	3:3:226:ASP:OD2	1.70	1.23
1:1:218:GLY:O	1:1:219:THR:CG2	1.89	1.21
1:1:23:SER:OG	1:1:53:THR:HG22	1.36	1.19
1:1:100:LYS:CA	1:1:101:ILE:HD13	1.73	1.19
2:2:18:ARG:NH1	2:2:249:MET:HE2	1.55	1.19
1:1:108:GLN:OE1	3:3:226:ASP:OD2	1.61	1.17
1:1:218:GLY:O	1:1:219:THR:HG22	0.98	1.16
3:3:42:ASN:HD22	3:3:44:ILE:HG22	1.06	1.15
1:1:101:ILE:HD13	1:1:101:ILE:N	1.33	1.14
1:1:101:ILE:CD1	1:1:219:THR:HA	1.76	1.14
1:1:104:GLN:O	3:3:236:ILE:HD11	1.44	1.13
1:1:108:GLN:CD	3:3:226:ASP:OD2	1.87	1.13
1:1:98:LYS:HA	1:1:220:ILE:O	1.50	1.12
1:1:254:PRO:HG3	3:3:101:GLU:HG2	1.27	1.12
1:1:104:GLN:O	3:3:236:ILE:CD1	1.99	1.11
1:1:211:SER:C	1:1:212:VAL:HG12	1.68	1.11
1:1:218:GLY:C	1:1:219:THR:HG22	1.63	1.11
1:1:147:TYR:CE1	5:1:700:W91:CL2	2.41	1.10
1:1:101:ILE:HG21	1:1:217:MET:O	1.51	1.09
1:1:154:ILE:CG2	1:1:221:CYS:SG	2.41	1.08
1:1:254:PRO:CG	3:3:101:GLU:HG2	1.81	1.08
2:2:18:ARG:HH12	2:2:249:MET:HE2	0.99	1.08
3:3:160:GLN:O	3:3:161:SER:HB3	1.48	1.07
1:1:124:GLU:O	1:1:124:GLU:HG3	1.52	1.07
1:1:46:GLN:HB3	1:1:47:PRO:CD	1.85	1.06
1:1:119:VAL:CG1	1:1:121:PHE:HE1	1.70	1.05
1:1:101:ILE:HD12	1:1:219:THR:HA	1.36	1.05
1:1:100:LYS:HA	1:1:101:ILE:HD13	1.17	1.04
1:1:6:TYR:HB3	1:1:7:ILE:HD13	1.42	1.02
1:1:104:GLN:HB2	1:1:262:SER:HB2	1.41	1.02
3:3:42:ASN:ND2	3:3:44:ILE:HG22	1.74	1.02
2:2:185:ILE:HD13	3:3:98:LEU:HD22	1.41	1.02
1:1:218:GLY:C	1:1:219:THR:CG2	2.21	1.01
1:1:45:VAL:H	3:3:114:ARG:NH1	1.59	1.01
3:3:117:PHE:HD1	3:3:211:CYS:HB3	1.25	1.01
1:1:46:GLN:CB	1:1:47:PRO:HD2	1.89	1.01
1:1:7:ILE:HA	1:1:11:LEU:HD23	1.41	1.00
1:1:142:VAL:CG1	1:1:225:VAL:HB	1.91	1.00
3:3:75:GLN:HA	3:3:75:GLN:NE2	1.75	1.00

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:83:PRO:HG2	2:2:218:ASN:HA	1.44	0.99
1:1:46:GLN:HB3	1:1:47:PRO:HD2	1.01	0.99
3:3:122:THR:HG22	3:3:123:ALA:H	1.21	0.99
1:1:278:ILE:HD12	3:3:67:MET:CE	1.93	0.98
3:3:75:GLN:HA	3:3:75:GLN:HE21	1.26	0.98
1:1:223:ARG:HG2	1:1:223:ARG:HH11	1.29	0.97
1:1:150:PRO:O	1:1:151:GLY:C	1.99	0.97
1:1:101:ILE:O	1:1:102:THR:OG1	1.83	0.97
3:3:117:PHE:CD1	3:3:211:CYS:HB3	2.00	0.97
1:1:211:SER:N	1:1:212:VAL:HG12	1.80	0.96
1:1:108:GLN:OE1	3:3:226:ASP:CG	2.04	0.95
3:3:51:THR:HG21	3:3:98:LEU:HB2	1.47	0.95
1:1:100:LYS:C	1:1:101:ILE:HD13	1.87	0.95
1:1:113:PHE:O	1:1:115:LEU:N	1.99	0.95
1:1:35:ASP:O	3:3:162:THR:HB	1.69	0.93
1:1:163:TRP:CH2	1:1:222:SER:O	2.21	0.93
2:2:185:ILE:HD13	3:3:98:LEU:CD2	2.00	0.92
1:1:101:ILE:CD1	1:1:219:THR:CA	2.47	0.92
1:1:127:LEU:HB2	1:1:180:PRO:HG2	1.49	0.91
1:1:211:SER:C	1:1:212:VAL:CG1	2.27	0.91
3:3:24:ALA:O	3:3:25:LEU:HB2	1.71	0.91
1:1:265:THR:OG1	2:2:133:ALA:HB2	1.69	0.90
1:1:96:PHE:CE2	1:1:157:LYS:HA	2.06	0.90
1:1:100:LYS:HA	1:1:101:ILE:HD11	1.52	0.89
1:1:101:ILE:HD12	1:1:219:THR:CA	2.01	0.89
2:2:12:ARG:HH11	2:2:12:ARG:HB3	1.36	0.89
1:1:141:ILE:HG12	1:1:141:ILE:O	1.69	0.89
1:1:119:VAL:HG11	1:1:121:PHE:HE1	1.36	0.88
1:1:173:TRP:CD1	1:1:180:PRO:HD3	2.08	0.88
1:1:119:VAL:CG1	1:1:121:PHE:CE1	2.56	0.88
1:1:67:ILE:HD11	3:3:40:VAL:HB	1.54	0.88
1:1:75:GLY:O	1:1:77:VAL:HG13	1.74	0.87
3:3:54:PRO:O	3:3:93:PRO:HB2	1.73	0.87
1:1:97:THR:HG23	1:1:222:SER:HB3	1.54	0.87
3:3:231:ILE:HD13	3:3:231:ILE:H	1.39	0.87
1:1:142:VAL:HG12	1:1:225:VAL:HB	1.57	0.86
3:3:58:VAL:O	3:3:61:ASN:HB2	1.76	0.86
1:1:254:PRO:HG3	3:3:101:GLU:CG	2.05	0.86
1:1:190:ALA:O	3:3:31:THR:HG21	1.75	0.86
3:3:42:ASN:HD22	3:3:44:ILE:CG2	1.87	0.86
1:1:171:ILE:HD11	1:1:180:PRO:HB2	1.58	0.86

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:161:ASP:HB2	2:2:164:LEU:HD22	1.55	0.86
3:3:82:VAL:HG12	3:3:83:PHE:N	1.90	0.85
1:1:17:VAL:HG13	1:1:60:GLN:O	1.76	0.85
1:1:119:VAL:HG13	1:1:121:PHE:CE1	2.12	0.85
1:1:97:THR:O	1:1:222:SER:N	2.10	0.84
3:3:82:VAL:HG12	3:3:83:PHE:HD1	1.39	0.84
1:1:140:HIS:O	1:1:226:THR:HG21	1.75	0.84
1:1:182:PHE:HE1	1:1:184:ILE:HD11	1.43	0.84
1:1:142:VAL:HG11	1:1:225:VAL:HB	1.60	0.84
2:2:159:GLU:C	2:2:160:ARG:HG2	1.97	0.83
1:1:101:ILE:HD11	1:1:219:THR:HA	1.59	0.83
3:3:102:ILE:HG22	3:3:103:ALA:N	1.92	0.83
3:3:51:THR:HG21	3:3:98:LEU:CB	2.07	0.83
1:1:278:ILE:HD12	3:3:67:MET:HE3	1.61	0.83
1:1:107:ALA:O	1:1:109:ILE:N	2.12	0.82
2:2:161:ASP:HB2	2:2:164:LEU:CD2	2.08	0.82
1:1:150:PRO:O	1:1:152:ALA:N	2.13	0.82
1:1:215:ASN:CG	1:1:215:ASN:O	2.18	0.81
2:2:168:SER:OG	2:2:170:ASP:HB2	1.79	0.81
3:3:7:THR:O	3:3:10:SER:HB2	1.80	0.81
1:1:129:PRO:HG2	1:1:173:TRP:CE2	2.16	0.81
1:1:197:TYR:H	2:2:131:GLN:HE21	1.28	0.81
1:1:123:SER:HB3	1:1:241:HIS:NE2	1.95	0.81
1:1:182:PHE:HA	3:3:21:SER:HB2	1.62	0.81
1:1:23:SER:CB	1:1:53:THR:HG22	2.11	0.80
1:1:204:ASN:C	1:1:206:SER:H	1.82	0.80
1:1:223:ARG:HG2	1:1:223:ARG:NH1	1.90	0.80
1:1:102:THR:CG2	1:1:263:HIS:CE1	2.65	0.79
3:3:194:GLN:HA	3:3:194:GLN:HE21	1.48	0.79
1:1:173:TRP:HD1	1:1:180:PRO:HD3	1.45	0.79
2:2:146:LEU:CD1	2:2:166:GLN:HA	2.13	0.79
1:1:110:ARG:O	1:1:114:GLU:HG3	1.82	0.79
1:1:45:VAL:H	3:3:114:ARG:HH11	1.31	0.78
1:1:101:ILE:HD11	1:1:219:THR:CA	2.12	0.78
2:2:12:ARG:HG3	2:2:13:ILE:N	1.99	0.78
2:2:60:SER:OG	2:2:61:ASN:N	2.14	0.78
2:2:173:LEU:O	2:2:174:ASN:HB2	1.83	0.78
1:1:7:ILE:O	1:1:11:LEU:HB2	1.84	0.77
1:1:104:GLN:HB2	1:1:262:SER:CB	2.13	0.77
3:3:231:ILE:H	3:3:231:ILE:CD1	1.97	0.77
1:1:212:VAL:C	1:1:214:THR:N	2.37	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:146:LEU:HD12	2:2:167:PRO:HD3	1.65	0.77
1:1:110:ARG:NE	1:1:114:GLU:OE2	2.19	0.76
1:1:119:VAL:HG13	1:1:121:PHE:HE1	1.50	0.76
1:1:99:TRP:CE3	1:1:220:ILE:HD12	2.21	0.76
1:1:278:ILE:CD1	3:3:67:MET:CE	2.64	0.76
1:1:255:ARG:HD3	1:1:259:TYR:CE2	2.20	0.76
2:2:78:TRP:HZ3	2:2:226:PRO:HD3	1.50	0.75
1:1:102:THR:HG22	1:1:103:LEU:H	1.50	0.75
1:1:211:SER:CA	1:1:212:VAL:HG12	2.16	0.75
2:2:68:SER:C	2:2:69:LYS:HG2	2.07	0.75
2:2:126:MET:HG3	2:2:201:LEU:HD12	1.66	0.75
3:3:20:GLN:HE22	4:4:30:ASN:HA	1.50	0.75
1:1:96:PHE:HB2	1:1:222:SER:O	1.86	0.75
1:1:147:TYR:HE1	5:1:700:W91:CL2	2.02	0.74
1:1:100:LYS:CA	1:1:101:ILE:CD1	2.44	0.74
4:4:26:TYR:CD1	4:4:29:ILE:HD11	2.22	0.74
1:1:182:PHE:HD1	1:1:183:SER:N	1.84	0.74
1:1:104:GLN:O	3:3:236:ILE:HD13	1.87	0.74
1:1:182:PHE:CE1	1:1:184:ILE:HD11	2.23	0.74
1:1:215:ASN:O	1:1:215:ASN:ND2	2.21	0.74
3:3:75:GLN:OE1	3:3:80:GLN:HG2	1.87	0.74
3:3:122:THR:HG22	3:3:123:ALA:N	1.99	0.74
1:1:33:LEU:O	3:3:163:ILE:HD12	1.88	0.74
1:1:148:VAL:HG11	1:1:154:ILE:HG13	1.68	0.73
3:3:160:GLN:O	3:3:161:SER:CB	2.32	0.73
2:2:257:ARG:HH11	2:2:257:ARG:HG2	1.53	0.73
3:3:81:LYS:HG3	3:3:82:VAL:N	2.01	0.73
2:2:12:ARG:CG	2:2:13:ILE:N	2.51	0.73
2:2:41:TYR:CD2	2:2:55:GLN:OE1	2.41	0.73
1:1:124:GLU:O	1:1:124:GLU:CG	2.35	0.73
1:1:92:GLN:O	1:1:93:ASP:HB2	1.89	0.72
3:3:53:ILE:O	3:3:55:VAL:HG12	1.89	0.72
2:2:183:LEU:HD12	2:2:186:PHE:HD2	1.52	0.72
1:1:211:SER:N	1:1:212:VAL:CG1	2.51	0.72
1:1:145:TYR:N	1:1:145:TYR:CD1	2.54	0.72
2:2:18:ARG:HH12	2:2:249:MET:CE	1.90	0.72
3:3:173:SER:O	3:3:175:PHE:N	2.22	0.72
2:2:148:HIS:N	2:2:149:PRO:CD	2.52	0.72
1:1:212:VAL:H	1:1:214:THR:H	1.37	0.72
1:1:46:GLN:OE1	3:3:217:LYS:HG3	1.89	0.72
2:2:148:HIS:N	2:2:149:PRO:HD3	2.05	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:207:ASN:HD22	2:2:209:VAL:H	1.37	0.72
3:3:125:THR:HG22	3:3:126:THR:N	2.03	0.72
2:2:146:LEU:HD12	2:2:167:PRO:CD	2.19	0.71
1:1:242:LYS:NZ	3:3:17:ASP:O	2.22	0.71
1:1:61:THR:HG22	1:1:63:ASP:OD1	1.90	0.71
2:2:37:VAL:HG21	3:3:37:PRO:HB3	1.72	0.71
3:3:82:VAL:HG12	3:3:83:PHE:CD1	2.25	0.71
1:1:97:THR:O	1:1:221:CYS:HA	1.91	0.70
1:1:101:ILE:H	1:1:101:ILE:HD13	0.71	0.70
1:1:146:MET:HB2	1:1:169:MET:O	1.91	0.70
1:1:169:MET:CE	1:1:171:ILE:HB	2.21	0.70
1:1:22:GLU:HA	1:1:54:ARG:O	1.91	0.70
1:1:223:ARG:HH11	1:1:223:ARG:CG	2.02	0.70
1:1:14:VAL:HG11	4:4:43:LEU:HB3	1.74	0.70
3:3:82:VAL:CG1	3:3:83:PHE:HD1	2.04	0.70
2:2:78:TRP:HE3	2:2:78:TRP:H	1.39	0.70
1:1:97:THR:HG23	1:1:222:SER:CB	2.21	0.70
2:2:12:ARG:HD3	2:2:27:ASP:HA	1.74	0.70
1:1:182:PHE:CD1	1:1:183:SER:N	2.60	0.69
1:1:269:PRO:HG2	1:1:272:GLY:O	1.93	0.69
2:2:78:TRP:N	2:2:78:TRP:CE3	2.60	0.69
1:1:92:GLN:C	1:1:94:ILE:HD12	2.13	0.69
1:1:281:ARG:HB3	3:3:57:ASN:O	1.92	0.69
2:2:41:TYR:HD2	2:2:55:GLN:OE1	1.76	0.69
1:1:67:ILE:CD1	3:3:40:VAL:HB	2.22	0.69
1:1:99:TRP:HE3	1:1:220:ILE:HD12	1.54	0.69
1:1:127:LEU:O	1:1:180:PRO:HD2	1.92	0.69
3:3:127:LEU:HG	3:3:128:LYS:N	2.08	0.69
1:1:113:PHE:C	1:1:115:LEU:H	1.93	0.69
1:1:142:VAL:HG13	1:1:143:MET:N	2.07	0.69
1:1:155:PRO:HB3	1:1:163:TRP:HE1	1.57	0.68
2:2:206:VAL:HG12	3:3:37:PRO:HG2	1.75	0.68
3:3:132:ALA:O	3:3:189:ILE:HA	1.93	0.68
2:2:103:ARG:HB3	2:2:211:MET:HG2	1.76	0.68
3:3:127:LEU:HA	3:3:196:ASN:O	1.93	0.68
1:1:38:GLU:O	2:2:189:GLN:HB2	1.93	0.68
1:1:44:ASN:C	1:1:44:ASN:HD22	1.96	0.68
1:1:91:GLY:C	1:1:94:ILE:HD13	2.14	0.68
3:3:42:ASN:HB3	3:3:44:ILE:HG22	1.73	0.68
1:1:7:ILE:CA	1:1:11:LEU:HD23	2.20	0.68
2:2:56:PRO:HB2	2:2:60:SER:HB3	1.76	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:78:TRP:HE3	2:2:78:TRP:N	1.92	0.67
2:2:171:SER:HA	2:2:175:PHE:CE1	2.28	0.67
1:1:23:SER:OG	1:1:53:THR:CG2	2.30	0.67
1:1:123:SER:HB3	1:1:241:HIS:CD2	2.29	0.67
3:3:42:ASN:ND2	3:3:44:ILE:CG2	2.53	0.67
2:2:51:ASN:HD22	2:2:51:ASN:H	1.41	0.67
2:2:78:TRP:CZ3	2:2:226:PRO:HD3	2.30	0.67
1:1:265:THR:HG1	2:2:133:ALA:HB2	1.59	0.67
1:1:182:PHE:HE1	1:1:184:ILE:CD1	2.08	0.66
1:1:92:GLN:C	1:1:94:ILE:CD1	2.63	0.66
1:1:107:ALA:O	1:1:110:ARG:N	2.26	0.66
1:1:163:TRP:HH2	1:1:222:SER:O	1.73	0.66
1:1:135:GLY:HA3	1:1:231:LEU:HB3	1.76	0.66
1:1:104:GLN:HG3	1:1:263:HIS:HD1	1.59	0.65
3:3:201:PRO:O	3:3:202:SER:HB2	1.96	0.65
2:2:12:ARG:HB3	2:2:12:ARG:NH1	2.10	0.65
2:2:126:MET:HE3	2:2:126:MET:HA	1.79	0.65
1:1:98:LYS:CA	1:1:220:ILE:O	2.39	0.65
1:1:104:GLN:HG3	1:1:263:HIS:ND1	2.11	0.65
1:1:160:ASP:H	1:1:163:TRP:HD1	1.44	0.65
3:3:66:SER:C	3:3:68:TYR:H	2.00	0.65
3:3:89:ILE:HD11	3:3:109:TRP:CG	2.31	0.65
2:2:146:LEU:HD12	2:2:166:GLN:HA	1.77	0.65
2:2:155:ASP:O	2:2:156:VAL:HB	1.98	0.64
3:3:87:VAL:HG22	3:3:189:ILE:HG22	1.79	0.64
1:1:19:ASN:HB3	1:1:56:VAL:O	1.97	0.64
1:1:101:ILE:CD1	1:1:219:THR:N	2.59	0.64
3:3:99:ILE:HG22	3:3:100:GLY:N	2.11	0.64
1:1:104:GLN:HA	1:1:110:ARG:HG3	1.79	0.64
1:1:181:ARG:HG2	1:1:182:PHE:N	2.12	0.64
3:3:89:ILE:HD11	3:3:109:TRP:CD2	2.33	0.64
1:1:163:TRP:CZ3	1:1:223:ARG:HB2	2.33	0.64
2:2:72:ASN:HB3	2:2:75:SER:N	2.13	0.64
2:2:207:ASN:ND2	2:2:209:VAL:HG22	2.13	0.64
1:1:102:THR:HG21	1:1:263:HIS:CE1	2.32	0.63
1:1:212:VAL:N	1:1:214:THR:H	1.96	0.63
1:1:186:PHE:HE1	3:3:31:THR:HG22	1.63	0.63
1:1:244:LYS:HE3	4:4:38:SER:O	1.99	0.63
1:1:113:PHE:HE2	1:1:121:PHE:CZ	2.16	0.63
1:1:183:SER:C	1:1:184:ILE:CG1	2.67	0.63
1:1:260:THR:C	1:1:261:HIS:CD2	2.71	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:276:THR:OG1	1:1:277:ALA:N	2.31	0.63
2:2:174:ASN:C	2:2:175:PHE:HD1	2.03	0.63
1:1:204:ASN:C	1:1:206:SER:N	2.52	0.62
1:1:155:PRO:HB3	1:1:163:TRP:NE1	2.15	0.62
3:3:89:ILE:HA	3:3:94:LEU:HD13	1.80	0.62
1:1:6:TYR:CB	1:1:7:ILE:HD13	2.25	0.62
1:1:260:THR:C	1:1:261:HIS:HD2	2.02	0.62
1:1:7:ILE:HD13	1:1:7:ILE:N	2.14	0.62
2:2:145:LYS:NZ	2:2:263:GLN:HG2	2.14	0.62
1:1:146:MET:CE	1:1:162:SER:O	2.48	0.62
1:1:195:MET:O	1:1:196:PHE:CD1	2.53	0.62
2:2:30:ASN:HD22	2:2:31:ALA:N	1.97	0.62
1:1:111:ARG:NH1	3:3:230:HIS:HB2	2.15	0.62
1:1:145:TYR:N	1:1:145:TYR:HD1	1.97	0.62
1:1:283:THR:HG22	1:1:285:THR:N	2.15	0.62
1:1:141:ILE:HA	1:1:226:THR:HG21	1.81	0.62
1:1:281:ARG:NH2	3:3:84:SER:O	2.33	0.62
3:3:102:ILE:O	3:3:105:TYR:HB2	2.00	0.62
1:1:124:GLU:OE1	1:1:181:ARG:HD3	2.00	0.61
3:3:90:THR:OG1	3:3:178:THR:O	2.15	0.61
1:1:37:ALA:HB2	3:3:162:THR:HG21	1.83	0.61
1:1:145:TYR:O	1:1:170:SER:HA	2.01	0.61
1:1:183:SER:C	1:1:184:ILE:HG13	2.20	0.61
2:2:84:ASP:HB2	2:2:218:ASN:HD21	1.66	0.61
2:2:91:ILE:O	2:2:92:PHE:C	2.39	0.61
1:1:102:THR:CG2	1:1:103:LEU:H	2.05	0.61
3:3:91:SER:O	3:3:92:THR:C	2.39	0.61
1:1:91:GLY:O	1:1:157:LYS:CB	2.49	0.61
2:2:183:LEU:HD12	2:2:186:PHE:CD2	2.34	0.61
1:1:94:ILE:HD12	1:1:94:ILE:N	2.16	0.61
1:1:14:VAL:HG12	1:1:15:LEU:HD22	1.81	0.61
1:1:182:PHE:CD1	1:1:182:PHE:C	2.74	0.61
1:1:140:HIS:O	1:1:226:THR:CG2	2.48	0.60
1:1:79:ILE:HD13	1:1:238:HIS:CE1	2.36	0.60
1:1:146:MET:O	1:1:146:MET:HG2	1.96	0.60
1:1:249:TRP:HA	3:3:39:GLU:HA	1.84	0.60
2:2:84:ASP:OD1	2:2:87:LYS:HE2	2.02	0.60
3:3:72:LEU:HD11	3:3:209:MET:HB3	1.82	0.60
1:1:200:TYR:CD2	1:1:209:TYR:HB2	2.37	0.60
4:4:43:LEU:O	4:4:44:ASP:C	2.38	0.60
1:1:101:ILE:CD1	1:1:101:ILE:N	1.97	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:136:ASP:O	1:1:137:ASP:HB2	2.02	0.60
1:1:91:GLY:O	1:1:157:LYS:HB3	2.02	0.60
3:3:44:ILE:O	3:3:47:CYS:HB2	2.02	0.60
3:3:95:ALA:O	3:3:97:THR:N	2.34	0.60
1:1:22:GLU:CA	1:1:54:ARG:O	2.50	0.59
1:1:149:PRO:O	1:1:150:PRO:O	2.20	0.59
1:1:204:ASN:HD22	1:1:205:THR:N	2.00	0.59
1:1:101:ILE:C	1:1:102:THR:OG1	2.37	0.59
1:1:150:PRO:O	1:1:152:ALA:CB	2.51	0.59
1:1:155:PRO:HD2	1:1:221:CYS:SG	2.41	0.59
1:1:210:GLY:C	1:1:212:VAL:HG13	2.23	0.59
2:2:65:THR:HG1	2:2:245:SER:HG	1.47	0.59
3:3:122:THR:CG2	3:3:123:ALA:H	1.99	0.59
1:1:7:ILE:HD13	1:1:7:ILE:H	1.66	0.59
2:2:77:GLY:HA2	2:2:78:TRP:CE3	2.37	0.59
2:2:207:ASN:HD21	2:2:209:VAL:HG22	1.67	0.59
2:2:144:TYR:O	2:2:146:LEU:N	2.36	0.59
1:1:123:SER:HA	1:1:242:LYS:O	2.02	0.59
3:3:145:LYS:HA	3:3:148:MET:HE2	1.84	0.59
1:1:142:VAL:CG1	1:1:225:VAL:CB	2.76	0.58
3:3:46:MET:O	3:3:98:LEU:HD23	2.03	0.58
1:1:85:ASP:OD1	1:1:86:TYR:N	2.36	0.58
1:1:101:ILE:HD12	1:1:219:THR:N	2.18	0.58
3:3:136:PRO:HG3	3:3:176:ARG:HH22	1.68	0.58
1:1:45:VAL:H	3:3:114:ARG:HH12	1.45	0.58
1:1:66:SER:O	1:1:68:GLU:N	2.37	0.58
2:2:57:ASP:O	2:2:58:THR:HG22	2.04	0.58
1:1:278:ILE:HA	3:3:92:THR:HG21	1.86	0.58
1:1:11:LEU:N	1:1:11:LEU:HD22	2.19	0.58
3:3:136:PRO:HG3	3:3:176:ARG:NH2	2.19	0.58
1:1:102:THR:CG2	1:1:263:HIS:HE1	2.16	0.58
2:2:154:ARG:HD3	2:2:155:ASP:N	2.19	0.58
1:1:119:VAL:HG13	1:1:121:PHE:CD1	2.39	0.58
1:1:142:VAL:H	1:1:226:THR:HG23	1.67	0.58
1:1:153:PRO:O	1:1:153:PRO:HG2	2.04	0.58
1:1:197:TYR:HD1	1:1:198:ASP:H	1.52	0.58
1:1:44:ASN:C	1:1:44:ASN:ND2	2.58	0.58
1:1:199:GLY:HA2	2:2:216:ARG:O	2.04	0.58
1:1:54:ARG:CG	1:1:55:TYR:H	2.16	0.57
3:3:54:PRO:HA	3:3:67:MET:O	2.04	0.57
1:1:124:GLU:HG2	1:1:242:LYS:HB3	1.86	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:7:ILE:H	1:1:7:ILE:CD1	2.17	0.57
1:1:97:THR:H	1:1:222:SER:HB3	1.69	0.57
2:2:49:ALA:O	2:2:50:ILE:HG13	2.04	0.57
2:2:257:ARG:HG2	2:2:257:ARG:NH1	2.14	0.57
2:2:235:THR:C	2:2:237:SER:H	2.06	0.57
3:3:194:GLN:HA	3:3:194:GLN:NE2	2.19	0.57
1:1:253:PRO:HD3	2:2:185:ILE:CG2	2.34	0.57
3:3:192:TRP:CD1	3:3:192:TRP:N	2.73	0.57
1:1:99:TRP:NE1	1:1:105:GLU:OE2	2.38	0.57
1:1:201:ASP:OD1	1:1:213:VAL:HG22	2.05	0.57
3:3:87:VAL:O	3:3:89:ILE:N	2.38	0.57
2:2:158:GLN:HG3	2:2:159:GLU:H	1.68	0.57
3:3:144:ARG:O	3:3:145:LYS:C	2.44	0.57
3:3:173:SER:O	3:3:174:HIS:C	2.43	0.57
1:1:146:MET:HE1	1:1:162:SER:O	2.05	0.56
1:1:261:HIS:H	3:3:237:GLU:H	1.52	0.56
1:1:127:LEU:CB	1:1:180:PRO:HG2	2.30	0.56
1:1:181:ARG:O	1:1:182:PHE:HB3	2.05	0.56
1:1:217:MET:O	1:1:217:MET:CG	2.53	0.56
1:1:253:PRO:HD3	2:2:185:ILE:HG21	1.86	0.56
1:1:90:ASN:HD22	1:1:158:ARG:HD3	1.70	0.56
1:1:150:PRO:O	1:1:152:ALA:HB2	2.05	0.56
3:3:228:ASP:HB3	3:3:229:LEU:HD12	1.88	0.56
2:2:72:ASN:HB3	2:2:74:SER:H	1.70	0.56
2:2:122:LEU:HD22	2:2:224:ILE:HG13	1.88	0.56
2:2:202:ILE:HD13	2:2:249:MET:CE	2.36	0.56
2:2:120:GLY:HA3	2:2:193:LEU:HD12	1.86	0.56
1:1:92:GLN:HA	1:1:157:LYS:HG2	1.86	0.56
2:2:173:LEU:O	2:2:174:ASN:CB	2.54	0.56
3:3:42:ASN:CB	3:3:44:ILE:HG22	2.36	0.56
1:1:143:MET:HG2	1:1:145:TYR:CE1	2.41	0.56
1:1:147:TYR:CZ	5:1:700:W91:CL2	2.94	0.56
3:3:165:LEU:HD12	3:3:166:VAL:N	2.21	0.56
1:1:255:ARG:NH2	1:1:259:TYR:HA	2.21	0.55
3:3:14:MET:HG2	3:3:16:THR:HG22	1.88	0.55
2:2:83:PRO:HG2	2:2:218:ASN:CA	2.28	0.55
3:3:42:ASN:HB3	3:3:44:ILE:CG2	2.36	0.55
1:1:92:GLN:N	1:1:94:ILE:CD1	2.68	0.55
3:3:83:PHE:CE1	3:3:191:CYS:CB	2.89	0.55
3:3:104:SER:O	3:3:227:THR:HA	2.06	0.55
3:3:107:THR:O	3:3:177:LEU:HD23	2.06	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:84:ASP:O	2:2:87:LYS:HD2	2.07	0.55
2:2:102:GLY:HA3	2:2:214:MET:HG3	1.88	0.55
1:1:66:SER:C	1:1:68:GLU:N	2.60	0.55
1:1:84:VAL:HG21	1:1:233:VAL:HG23	1.88	0.55
1:1:184:ILE:HG22	1:1:185:PRO:O	2.06	0.55
3:3:81:LYS:HB2	3:3:192:TRP:CE3	2.41	0.55
2:2:127:ILE:HD11	2:2:183:LEU:HD11	1.89	0.55
1:1:67:ILE:HD11	3:3:40:VAL:CB	2.33	0.55
1:1:182:PHE:HE1	1:1:184:ILE:CG1	2.19	0.55
1:1:210:GLY:C	1:1:212:VAL:CG1	2.75	0.55
3:3:125:THR:CG2	3:3:126:THR:N	2.70	0.55
1:1:145:TYR:HE2	1:1:237:THR:HG1	1.53	0.55
1:1:257:VAL:HG11	1:1:274:VAL:HG21	1.89	0.55
3:3:155:TRP:CD2	3:3:163:ILE:CG2	2.90	0.55
1:1:89:TYR:O	1:1:90:ASN:HB2	2.06	0.55
2:2:116:LYS:HB2	3:3:124:ASN:ND2	2.21	0.55
1:1:91:GLY:C	1:1:94:ILE:CD1	2.75	0.54
2:2:227:ILE:HG21	3:3:210:LEU:HD11	1.89	0.54
3:3:80:GLN:HA	3:3:80:GLN:NE2	2.22	0.54
2:2:174:ASN:O	2:2:175:PHE:HB2	2.07	0.54
2:2:23:ILE:HG21	2:2:109:HIS:CD2	2.42	0.54
1:1:80:SER:HB3	1:1:237:THR:HG23	1.89	0.54
1:1:201:ASP:OD1	1:1:208:LYS:HB2	2.06	0.54
3:3:81:LYS:HB2	3:3:192:TRP:CZ3	2.43	0.54
3:3:103:ALA:O	3:3:178:THR:HG21	2.08	0.54
1:1:61:THR:HG22	1:1:63:ASP:CG	2.28	0.54
1:1:61:THR:CG2	1:1:63:ASP:OD1	2.54	0.54
1:1:84:VAL:HG12	1:1:85:ASP:N	2.22	0.54
2:2:174:ASN:HB3	2:2:176:ASP:OD2	2.08	0.54
1:1:19:ASN:HA	1:1:58:THR:HG23	1.89	0.54
1:1:72:GLY:C	1:1:73:ARG:HG2	2.27	0.54
1:1:102:THR:HG23	1:1:263:HIS:CE1	2.42	0.54
1:1:183:SER:HG	3:3:21:SER:HG	1.54	0.54
1:1:119:VAL:HG11	1:1:121:PHE:CE1	2.28	0.54
3:3:121:GLY:HA2	3:3:207:ALA:HB1	1.88	0.54
2:2:235:THR:OG1	2:2:237:SER:HB3	2.08	0.54
1:1:169:MET:HE2	1:1:171:ILE:HB	1.89	0.54
1:1:283:THR:CG2	1:1:285:THR:HB	2.38	0.54
3:3:94:LEU:O	3:3:95:ALA:C	2.45	0.54
1:1:96:PHE:HE2	1:1:157:LYS:HA	1.70	0.53
1:1:266:ASN:OD1	2:2:134:SER:N	2.34	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:269:PRO:CG	1:1:272:GLY:O	2.56	0.53
2:2:122:LEU:O	2:2:190:PHE:HA	2.08	0.53
1:1:17:VAL:CG1	1:1:60:GLN:O	2.53	0.53
2:2:57:ASP:O	2:2:58:THR:CB	2.55	0.53
1:1:284:ILE:HG13	1:1:285:THR:N	2.23	0.53
2:2:40:HIS:HA	2:2:250:CYS:SG	2.47	0.53
1:1:113:PHE:CE2	1:1:121:PHE:CZ	2.96	0.53
2:2:103:ARG:CB	2:2:211:MET:HG2	2.38	0.53
1:1:92:GLN:O	1:1:94:ILE:HD11	2.09	0.53
1:1:129:PRO:HG2	1:1:173:TRP:NE1	2.24	0.53
1:1:200:TYR:HA	1:1:208:LYS:O	2.08	0.53
4:4:26:TYR:CD1	4:4:29:ILE:CD1	2.91	0.53
1:1:33:LEU:HB3	3:3:163:ILE:HD11	1.90	0.53
1:1:89:TYR:HE2	1:1:227:GLU:C	2.12	0.53
1:1:145:TYR:HD1	1:1:145:TYR:H	1.56	0.53
2:2:41:TYR:CE2	2:2:55:GLN:OE1	2.62	0.53
3:3:89:ILE:HA	3:3:94:LEU:CD1	2.38	0.53
1:1:181:ARG:HG2	1:1:182:PHE:H	1.72	0.53
1:1:261:HIS:CD2	1:1:261:HIS:N	2.74	0.53
2:2:174:ASN:C	2:2:175:PHE:CD1	2.82	0.53
1:1:200:TYR:CE2	1:1:209:TYR:HB2	2.44	0.52
1:1:278:ILE:CD1	3:3:67:MET:HE1	2.37	0.52
2:2:61:ASN:HB2	2:2:248:PRO:O	2.09	0.52
3:3:169:TRP:CZ3	3:3:176:ARG:HD2	2.44	0.52
2:2:158:GLN:CG	2:2:159:GLU:H	2.21	0.52
2:2:185:ILE:HD13	3:3:98:LEU:HD21	1.91	0.52
2:2:202:ILE:HD13	2:2:249:MET:HE3	1.92	0.52
3:3:66:SER:O	3:3:68:TYR:N	2.42	0.52
3:3:237:GLU:CG	3:3:238:GLN:H	2.20	0.52
1:1:257:VAL:HG21	2:2:173:LEU:HD11	1.91	0.52
2:2:18:ARG:HG3	2:2:247:SER:OG	2.09	0.52
1:1:84:VAL:HG12	1:1:85:ASP:H	1.75	0.52
3:3:136:PRO:HB3	3:3:185:MET:O	2.10	0.52
1:1:281:ARG:HH11	3:3:57:ASN:HB3	1.74	0.52
3:3:75:GLN:HG2	3:3:80:GLN:HB3	1.91	0.52
1:1:197:TYR:H	2:2:131:GLN:NE2	2.04	0.52
1:1:217:MET:SD	5:1:700:W91:O1	2.68	0.51
2:2:110:VAL:O	2:2:198:SER:HA	2.10	0.51
2:2:190:PHE:O	2:2:196:ASN:ND2	2.43	0.51
3:3:7:THR:O	3:3:10:SER:CB	2.53	0.51
3:3:83:PHE:CE1	3:3:191:CYS:HB3	2.46	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:7:ILE:HA	1:1:11:LEU:CD2	2.28	0.51
2:2:12:ARG:O	2:2:28:VAL:HG22	2.10	0.51
2:2:14:MET:HG2	2:2:15:GLN:N	2.25	0.51
2:2:173:LEU:O	2:2:177:GLY:N	2.44	0.51
3:3:201:PRO:O	3:3:202:SER:CB	2.53	0.51
1:1:6:TYR:O	1:1:10:VAL:N	2.44	0.51
1:1:141:ILE:O	1:1:141:ILE:CG1	2.51	0.51
3:3:173:SER:C	3:3:175:PHE:N	2.63	0.51
3:3:181:ASN:OD1	3:3:183:TYR:HB3	2.11	0.51
1:1:104:GLN:HA	1:1:110:ARG:CD	2.41	0.51
1:1:171:ILE:CD1	1:1:180:PRO:HB2	2.37	0.51
1:1:271:THR:HG22	1:1:272:GLY:N	2.25	0.51
1:1:127:LEU:HD21	5:1:700:W91:H5A1	1.92	0.51
2:2:86:LEU:C	2:2:88:ASP:H	2.14	0.51
3:3:99:ILE:CG2	3:3:100:GLY:N	2.73	0.51
1:1:7:ILE:O	1:1:11:LEU:HD23	2.11	0.51
1:1:7:ILE:O	1:1:11:LEU:N	2.43	0.51
1:1:46:GLN:O	1:1:49:ASP:HB2	2.10	0.51
4:4:42:ARG:HH12	4:4:44:ASP:HB3	1.76	0.51
1:1:254:PRO:HG2	3:3:101:GLU:HG2	1.83	0.50
3:3:56:ASN:C	3:3:58:VAL:H	2.12	0.50
3:3:110:THR:O	3:3:219:PHE:HA	2.10	0.50
1:1:124:GLU:HG2	1:1:242:LYS:CB	2.41	0.50
1:1:185:PRO:HD3	3:3:23:CYS:SG	2.51	0.50
1:1:217:MET:O	1:1:217:MET:HG3	2.12	0.50
2:2:154:ARG:HH11	2:2:154:ARG:CG	2.24	0.50
4:4:26:TYR:O	4:4:27:PHE:HB2	2.11	0.50
1:1:42:THR:HG22	1:1:43:SER:O	2.12	0.50
1:1:92:GLN:C	1:1:94:ILE:HD11	2.31	0.50
2:2:137:HIS:CD2	2:2:138:GLY:N	2.79	0.50
3:3:62:VAL:HA	3:3:67:MET:HG3	1.94	0.50
3:3:72:LEU:HD12	3:3:72:LEU:N	2.26	0.50
1:1:146:MET:HE3	1:1:162:SER:O	2.12	0.50
1:1:244:LYS:CE	4:4:38:SER:O	2.60	0.50
3:3:102:ILE:O	3:3:105:TYR:N	2.44	0.50
1:1:281:ARG:HH11	3:3:57:ASN:CB	2.26	0.49
3:3:140:GLU:HB3	3:3:188:TYR:CD2	2.47	0.49
1:1:19:ASN:N	1:1:19:ASN:ND2	2.57	0.49
1:1:44:ASN:ND2	1:1:44:ASN:O	2.34	0.49
3:3:141:PRO:HG3	3:3:147:ALA:HB2	1.93	0.49
3:3:231:ILE:CD1	3:3:231:ILE:N	2.69	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:163:TRP:CH2	1:1:222:SER:C	2.86	0.49
2:2:175:PHE:CD1	2:2:175:PHE:N	2.79	0.49
3:3:25:LEU:N	3:3:26:PRO:HD3	2.27	0.49
2:2:57:ASP:O	2:2:59:SER:N	2.42	0.49
1:1:191:SER:CB	3:3:34:ILE:HG12	2.43	0.49
2:2:174:ASN:C	2:2:176:ASP:H	2.16	0.49
3:3:117:PHE:CE2	3:3:131:LEU:HG	2.47	0.49
1:1:141:ILE:CD1	1:1:235:ILE:HG12	2.43	0.49
3:3:200:PRO:O	3:3:203:THR:OG1	2.22	0.49
3:3:14:MET:C	3:3:16:THR:H	2.16	0.49
1:1:34:LEU:HD23	3:3:162:THR:O	2.12	0.49
2:2:18:ARG:HA	2:2:18:ARG:HD3	1.57	0.49
2:2:32:VAL:HB	2:2:201:LEU:HD22	1.94	0.49
2:2:146:LEU:HD12	2:2:167:PRO:HD2	1.95	0.49
2:2:146:LEU:HD11	2:2:166:GLN:HA	1.94	0.49
3:3:127:LEU:CG	3:3:128:LYS:N	2.75	0.49
1:1:186:PHE:CD1	1:1:186:PHE:C	2.86	0.49
2:2:70:HIS:ND1	2:2:71:TRP:N	2.61	0.49
2:2:81:LYS:HE2	2:2:132:LEU:HD11	1.94	0.49
2:2:159:GLU:OE1	2:2:159:GLU:HA	2.11	0.49
1:1:45:VAL:N	3:3:114:ARG:NH1	2.43	0.48
1:1:197:TYR:N	2:2:131:GLN:HE21	2.05	0.48
3:3:65:VAL:O	3:3:67:MET:N	2.46	0.48
1:1:173:TRP:HE3	1:1:173:TRP:O	1.95	0.48
1:1:261:HIS:H	3:3:237:GLU:N	2.11	0.48
3:3:118:MET:O	3:3:209:MET:HA	2.12	0.48
3:3:155:TRP:CD2	3:3:163:ILE:HG22	2.48	0.48
3:3:51:THR:HG21	3:3:98:LEU:HB3	1.92	0.48
1:1:230:LYS:HD3	1:1:231:LEU:HD22	1.95	0.48
2:2:18:ARG:NH1	2:2:249:MET:CE	2.50	0.48
2:2:192:ASN:O	2:2:194:ARG:N	2.46	0.48
3:3:135:PRO:CB	3:3:136:PRO:HD2	2.42	0.48
2:2:15:GLN:HG3	2:2:16:ILE:N	2.29	0.48
3:3:112:SER:H	3:3:218:ASP:HB3	1.79	0.48
3:3:155:TRP:CG	3:3:163:ILE:HG21	2.49	0.48
1:1:48:GLU:HA	1:1:53:THR:HG21	1.96	0.48
1:1:65:MET:O	3:3:42:ASN:CG	2.51	0.48
1:1:197:TYR:HD1	1:1:198:ASP:N	2.10	0.48
2:2:107:THR:OG1	2:2:249:MET:CE	2.61	0.48
1:1:38:GLU:C	1:1:40:GLY:H	2.15	0.48
1:1:204:ASN:HD22	1:1:205:THR:H	1.61	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:204:ASN:O	1:1:206:SER:N	2.45	0.48
1:1:197:TYR:CD1	1:1:198:ASP:N	2.81	0.48
3:3:55:VAL:C	3:3:57:ASN:N	2.67	0.48
3:3:61:ASN:ND2	3:3:66:SER:HB2	2.29	0.48
1:1:112:LYS:O	1:1:115:LEU:HB2	2.13	0.48
1:1:15:LEU:CD2	4:4:43:LEU:HD23	2.44	0.47
1:1:93:ASP:N	1:1:94:ILE:HD12	2.28	0.47
1:1:257:VAL:HG21	2:2:173:LEU:CD1	2.44	0.47
2:2:82:LEU:CB	2:2:83:PRO:HD3	2.43	0.47
2:2:224:ILE:HD11	2:2:242:ILE:HD13	1.96	0.47
2:2:12:ARG:CG	2:2:13:ILE:H	2.26	0.47
2:2:128:PRO:HD2	2:2:186:PHE:CD1	2.49	0.47
2:2:174:ASN:ND2	2:2:178:THR:O	2.41	0.47
2:2:30:ASN:HD22	2:2:31:ALA:H	1.62	0.47
2:2:111:GLN:OE1	2:2:245:SER:OG	2.31	0.47
2:2:154:ARG:NH2	2:2:167:PRO:HG2	2.28	0.47
1:1:84:VAL:CG2	1:1:233:VAL:HG23	2.44	0.47
1:1:86:TYR:CZ	1:1:229:GLN:HB2	2.49	0.47
1:1:186:PHE:CE1	3:3:31:THR:HG22	2.46	0.47
2:2:82:LEU:HD21	2:2:246:ILE:HD13	1.96	0.47
1:1:101:ILE:HG22	5:1:700:W91:H3C1	1.95	0.47
3:3:155:TRP:CD1	3:3:155:TRP:C	2.87	0.47
3:3:219:PHE:CE2	3:3:221:LEU:HD13	2.50	0.47
1:1:89:TYR:O	1:1:90:ASN:CB	2.62	0.47
1:1:89:TYR:HD1	1:1:89:TYR:HA	1.49	0.47
1:1:104:GLN:HA	1:1:110:ARG:CG	2.44	0.47
1:1:149:PRO:CB	1:1:150:PRO:HD2	2.45	0.47
2:2:66:LEU:HD23	2:2:80:TRP:CD1	2.50	0.47
2:2:78:TRP:CZ2	2:2:242:ILE:HD12	2.49	0.47
2:2:145:LYS:HZ1	2:2:263:GLN:HG2	1.77	0.47
3:3:136:PRO:HD3	3:3:186:ALA:O	2.15	0.47
2:2:102:GLY:HA3	2:2:214:MET:CG	2.45	0.47
3:3:82:VAL:HG12	3:3:83:PHE:H	1.78	0.47
3:3:131:LEU:CD1	3:3:191:CYS:SG	3.02	0.47
2:2:111:GLN:H	2:2:111:GLN:HG2	1.29	0.47
2:2:253:PHE:O	2:2:254:SER:HB3	2.15	0.47
3:3:124:ASN:HD22	3:3:124:ASN:H	1.63	0.47
1:1:42:THR:HG21	3:3:48:GLN:O	2.15	0.47
3:3:84:SER:OG	3:3:140:GLU:OE1	2.30	0.47
1:1:169:MET:HG2	1:1:170:SER:N	2.30	0.46
2:2:69:LYS:O	2:2:241:PRO:HA	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:131:LEU:O	3:3:152:HIS:HB2	2.15	0.46
1:1:113:PHE:HE2	1:1:121:PHE:CE1	2.33	0.46
2:2:130:HIS:CB	2:2:221:CYS:SG	3.03	0.46
1:1:124:GLU:OE1	1:1:181:ARG:CD	2.63	0.46
4:4:27:PHE:O	4:4:28:ASN:HB2	2.14	0.46
1:1:11:LEU:HD13	1:1:11:LEU:HA	1.77	0.46
2:2:206:VAL:O	2:2:207:ASN:HB2	2.15	0.46
3:3:217:LYS:HG3	3:3:217:LYS:H	1.64	0.46
1:1:280:ARG:HG3	3:3:62:VAL:HG21	1.98	0.46
2:2:43:THR:HA	2:2:44:PRO:HD2	1.80	0.46
2:2:116:LYS:HB2	3:3:124:ASN:HD21	1.79	0.46
2:2:121:THR:HG22	2:2:227:ILE:HB	1.98	0.46
1:1:99:TRP:HE1	1:1:105:GLU:CD	2.19	0.46
2:2:57:ASP:O	2:2:58:THR:HB	2.15	0.46
2:2:200:THR:C	2:2:201:LEU:HD23	2.36	0.46
3:3:46:MET:HE3	3:3:102:ILE:HD11	1.98	0.46
1:1:188:SER:OG	1:1:190:ALA:HB3	2.16	0.46
2:2:46:ASP:HB3	3:3:34:ILE:HB	1.98	0.46
2:2:82:LEU:HD23	2:2:82:LEU:HA	1.55	0.46
1:1:224:ILE:HG21	1:1:224:ILE:HD13	1.46	0.46
1:1:255:ARG:HH21	1:1:259:TYR:HA	1.80	0.46
3:3:99:ILE:O	3:3:102:ILE:HB	2.16	0.46
1:1:197:TYR:HE1	2:2:217:HIS:CG	2.34	0.46
1:1:281:ARG:N	3:3:57:ASN:O	2.45	0.46
1:1:283:THR:CG2	1:1:285:THR:H	2.29	0.45
1:1:100:LYS:HG3	1:1:101:ILE:HG12	1.98	0.45
2:2:164:LEU:O	2:2:166:GLN:HB2	2.16	0.45
1:1:142:VAL:H	1:1:226:THR:CG2	2.29	0.45
3:3:237:GLU:HG3	3:3:238:GLN:H	1.81	0.45
2:2:121:THR:OG1	3:3:120:CYS:HB3	2.17	0.45
2:2:127:ILE:HG22	2:2:128:PRO:O	2.16	0.45
2:2:171:SER:O	2:2:174:ASN:N	2.38	0.45
2:2:174:ASN:ND2	2:2:180:LEU:HA	2.32	0.45
2:2:182:ASN:O	2:2:185:ILE:HG22	2.16	0.45
1:1:19:ASN:CB	1:1:56:VAL:O	2.63	0.45
1:1:90:ASN:ND2	1:1:158:ARG:HD3	2.31	0.45
1:1:142:VAL:HG11	1:1:225:VAL:CB	2.39	0.45
2:2:72:ASN:HB3	2:2:75:SER:H	1.78	0.45
3:3:15:THR:H	3:3:15:THR:HG22	1.45	0.45
3:3:161:SER:OG	3:3:162:THR:N	2.47	0.45
1:1:23:SER:OG	1:1:53:THR:N	2.49	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:75:GLY:N	1:1:240:TYR:HD1	2.15	0.45
1:1:77:VAL:HG22	1:1:239:ILE:HG22	1.98	0.45
2:2:145:LYS:HZ2	2:2:263:GLN:HG2	1.82	0.45
1:1:80:SER:O	1:1:236:THR:HA	2.16	0.45
3:3:87:VAL:HG22	3:3:189:ILE:CG2	2.45	0.45
3:3:88:ASP:O	3:3:90:THR:N	2.43	0.45
3:3:93:PRO:O	3:3:94:LEU:O	2.35	0.45
1:1:194:TYR:OH	2:2:207:ASN:ND2	2.50	0.45
2:2:136:LYS:HA	2:2:136:LYS:HD3	1.59	0.45
3:3:42:ASN:O	3:3:43:LEU:C	2.54	0.45
3:3:87:VAL:CG2	3:3:189:ILE:HG22	2.46	0.45
1:1:282:ASN:HD22	1:1:282:ASN:HA	1.55	0.45
2:2:61:ASN:HD22	2:2:250:CYS:H	1.65	0.45
2:2:257:ARG:O	2:2:258:ALA:O	2.35	0.45
3:3:25:LEU:N	3:3:26:PRO:CD	2.79	0.45
3:3:101:GLU:HA	3:3:229:LEU:HD22	1.99	0.45
4:4:30:ASN:N	4:4:30:ASN:ND2	2.65	0.44
1:1:54:ARG:HD2	1:1:56:VAL:HG22	2.00	0.44
1:1:66:SER:C	1:1:68:GLU:H	2.21	0.44
1:1:147:TYR:CD1	5:1:700:W91:H3B	2.53	0.44
1:1:218:GLY:C	1:1:219:THR:HG23	2.26	0.44
3:3:97:THR:O	3:3:98:LEU:C	2.56	0.44
2:2:103:ARG:HD3	2:2:252:GLU:OE1	2.16	0.44
1:1:245:HIS:CE1	4:4:38:SER:OG	2.70	0.44
3:3:173:SER:C	3:3:175:PHE:H	2.20	0.44
2:2:79:TRP:CZ3	2:2:81:LYS:HD3	2.52	0.44
2:2:91:ILE:HG22	2:2:92:PHE:N	2.32	0.44
3:3:130:LEU:C	3:3:130:LEU:HD23	2.38	0.44
1:1:90:ASN:HD22	1:1:90:ASN:N	2.16	0.44
1:1:182:PHE:CA	3:3:21:SER:HB2	2.40	0.44
1:1:244:LYS:NZ	4:4:38:SER:H	2.16	0.44
3:3:155:TRP:CD2	3:3:163:ILE:HG21	2.53	0.44
1:1:5:ASN:O	1:1:9:GLU:HB2	2.18	0.44
2:2:80:TRP:NE1	2:2:151:GLU:O	2.50	0.44
1:1:40:GLY:HA3	2:2:188:HIS:O	2.18	0.44
1:1:74:SER:HB2	3:3:15:THR:HA	2.00	0.44
1:1:96:PHE:CZ	1:1:155:PRO:O	2.71	0.44
2:2:29:ALA:O	2:2:30:ASN:C	2.56	0.44
2:2:155:ASP:HB3	2:2:156:VAL:H	1.62	0.43
2:2:235:THR:HG23	2:2:235:THR:O	2.17	0.43
3:3:126:THR:O	3:3:197:LEU:HA	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:54:ARG:HG3	1:1:55:TYR:H	1.83	0.43
1:1:129:PRO:HA	1:1:237:THR:HA	2.00	0.43
1:1:268:MET:O	2:2:137:HIS:HB2	2.19	0.43
2:2:126:MET:HE2	2:2:126:MET:HB3	1.80	0.43
2:2:137:HIS:CD2	2:2:137:HIS:C	2.91	0.43
2:2:179:LEU:O	2:2:180:LEU:C	2.56	0.43
3:3:103:ALA:C	3:3:105:TYR:H	2.21	0.43
1:1:156:SER:C	1:1:157:LYS:HG3	2.38	0.43
1:1:262:SER:O	1:1:263:HIS:HB2	2.18	0.43
1:1:101:ILE:HD11	1:1:219:THR:CB	2.49	0.43
2:2:38:TRP:HA	2:2:39:PRO:HD2	1.70	0.43
2:2:43:THR:C	2:2:45:GLN:H	2.22	0.43
2:2:185:ILE:CD1	3:3:98:LEU:CD2	2.85	0.43
1:1:46:GLN:CB	1:1:47:PRO:CD	2.57	0.43
1:1:244:LYS:NZ	4:4:38:SER:O	2.52	0.43
2:2:37:VAL:HG12	2:2:204:PRO:HB3	2.01	0.43
3:3:43:LEU:O	3:3:44:ILE:C	2.56	0.43
1:1:7:ILE:O	1:1:11:LEU:CB	2.60	0.43
1:1:99:TRP:CE3	1:1:220:ILE:CD1	2.98	0.43
1:1:125:ILE:HD13	5:1:700:W91:C6B	2.48	0.43
1:1:148:VAL:CG1	1:1:152:ALA:HB3	2.48	0.43
1:1:169:MET:HE1	1:1:171:ILE:CG2	2.49	0.43
1:1:260:THR:HB	1:1:261:HIS:CD2	2.53	0.43
2:2:128:PRO:HD3	2:2:220:TRP:CZ3	2.53	0.43
1:1:58:THR:O	1:1:59:SER:HB3	2.19	0.43
2:2:147:THR:C	2:2:149:PRO:CD	2.87	0.43
2:2:174:ASN:O	2:2:175:PHE:CB	2.66	0.43
2:2:207:ASN:O	2:2:209:VAL:N	2.51	0.43
3:3:1:GLY:O	3:3:3:PRO:HD3	2.18	0.43
3:3:7:THR:HA	3:3:8:PRO:HD3	1.78	0.43
1:1:260:THR:HB	1:1:261:HIS:HD2	1.84	0.43
1:1:271:THR:O	1:1:272:GLY:C	2.58	0.43
2:2:61:ASN:N	2:2:61:ASN:OD1	2.49	0.43
3:3:54:PRO:HA	3:3:68:TYR:CD1	2.54	0.43
2:2:99:HIS:HA	2:2:255:GLY:O	2.19	0.43
2:2:191:ILE:HA	2:2:196:ASN:ND2	2.33	0.43
1:1:106:MET:O	1:1:107:ALA:O	2.36	0.42
1:1:267:TYR:O	1:1:268:MET:C	2.57	0.42
2:2:57:ASP:O	2:2:58:THR:CG2	2.66	0.42
2:2:83:PRO:CG	2:2:218:ASN:HA	2.32	0.42
2:2:154:ARG:HH11	2:2:154:ARG:HG2	1.83	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:3:50:ASP:CA	3:3:214:SER:HB3	2.49	0.42
1:1:115:LEU:HA	1:1:115:LEU:HD12	1.76	0.42
2:2:98:TYR:CE2	2:2:259:LYS:HD2	2.54	0.42
2:2:192:ASN:C	2:2:194:ARG:H	2.21	0.42
3:3:88:ASP:OD1	3:3:186:ALA:N	2.39	0.42
3:3:122:THR:HB	3:3:125:THR:OG1	2.19	0.42
2:2:65:THR:HA	2:2:245:SER:HA	2.02	0.42
2:2:84:ASP:HB2	2:2:218:ASN:ND2	2.33	0.42
1:1:74:SER:HA	1:1:241:HIS:O	2.20	0.42
1:1:104:GLN:HG3	1:1:263:HIS:CE1	2.54	0.42
4:4:26:TYR:HD1	4:4:29:ILE:HD11	1.78	0.42
1:1:38:GLU:O	2:2:189:GLN:CB	2.66	0.42
2:2:95:ASN:HB3	2:2:253:PHE:CE2	2.54	0.42
2:2:200:THR:O	2:2:201:LEU:HD23	2.19	0.42
1:1:99:TRP:O	1:1:219:THR:HA	2.20	0.42
2:2:58:THR:CG2	2:2:59:SER:N	2.83	0.42
3:3:216:CYS:C	3:3:218:ASP:H	2.22	0.42
2:2:203:VAL:HA	2:2:204:PRO:HD2	1.75	0.42
3:3:83:PHE:CD1	3:3:191:CYS:HB3	2.55	0.42
1:1:145:TYR:HB2	1:1:171:ILE:HG23	2.01	0.42
1:1:278:ILE:CD1	3:3:67:MET:HE3	2.40	0.42
2:2:21:SER:OG	2:2:63:PHE:HB2	2.19	0.42
3:3:50:ASP:N	3:3:214:SER:HB3	2.34	0.42
3:3:149:LEU:HD23	3:3:149:LEU:HA	1.73	0.42
3:3:159:LEU:HD23	3:3:159:LEU:HA	1.72	0.42
1:1:92:GLN:N	1:1:94:ILE:HD11	2.35	0.41
1:1:190:ALA:C	3:3:31:THR:HG21	2.38	0.41
1:1:283:THR:HG22	1:1:285:THR:H	1.83	0.41
2:2:203:VAL:HG22	2:2:220:TRP:CZ2	2.55	0.41
3:3:219:PHE:O	3:3:220:CYS:HB2	2.20	0.41
1:1:7:ILE:N	1:1:7:ILE:CD1	2.76	0.41
1:1:31:ALA:HA	1:1:32:PRO:HD2	1.81	0.41
1:1:90:ASN:C	1:1:91:GLY:O	2.57	0.41
1:1:184:ILE:HG23	1:1:185:PRO:HD2	2.02	0.41
3:3:57:ASN:HD22	3:3:57:ASN:HA	1.21	0.41
1:1:257:VAL:HA	1:1:258:PRO:HD2	1.69	0.41
2:2:118:HIS:O	3:3:122:THR:HG23	2.19	0.41
2:2:158:GLN:CG	2:2:159:GLU:N	2.83	0.41
1:1:122:ASP:OD1	1:1:245:HIS:HB2	2.20	0.41
1:1:131:ILE:HD13	1:1:141:ILE:HG23	2.02	0.41
1:1:136:ASP:O	1:1:137:ASP:CB	2.67	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:63:PHE:CD1	2:2:247:SER:HB2	2.55	0.41
3:3:144:ARG:O	3:3:145:LYS:O	2.39	0.41
1:1:128:VAL:HB	1:1:238:HIS:HB2	2.02	0.41
1:1:165:SER:HG	1:1:170:SER:HG	1.55	0.41
1:1:77:VAL:HG22	1:1:239:ILE:O	2.21	0.41
1:1:132:ALA:HB3	1:1:234:VAL:HG13	2.02	0.41
2:2:155:ASP:O	2:2:156:VAL:CB	2.68	0.41
3:3:65:VAL:C	3:3:67:MET:N	2.74	0.41
1:1:111:ARG:HA	1:1:259:TYR:OH	2.21	0.41
1:1:148:VAL:HA	1:1:149:PRO:HD2	1.79	0.41
2:2:86:LEU:C	2:2:88:ASP:N	2.74	0.41
3:3:91:SER:C	3:3:92:THR:O	2.58	0.41
3:3:191:CYS:C	3:3:192:TRP:CD1	2.94	0.41
1:1:98:LYS:HB3	1:1:221:CYS:SG	2.61	0.41
1:1:99:TRP:CZ3	1:1:220:ILE:HD12	2.55	0.41
1:1:165:SER:C	1:1:167:THR:N	2.74	0.41
2:2:126:MET:O	2:2:186:PHE:HB3	2.21	0.41
2:2:147:THR:C	2:2:149:PRO:HD3	2.40	0.41
2:2:175:PHE:HD1	2:2:175:PHE:N	2.18	0.41
3:3:43:LEU:HA	3:3:43:LEU:HD23	1.77	0.41
3:3:72:LEU:CD1	3:3:209:MET:HB3	2.48	0.41
3:3:83:PHE:CE1	3:3:191:CYS:HB2	2.56	0.41
1:1:169:MET:CE	1:1:171:ILE:CB	2.96	0.41
2:2:55:GLN:HA	2:2:56:PRO:HD2	1.98	0.41
2:2:109:HIS:CE1	2:2:198:SER:HB3	2.56	0.41
1:1:9:GLU:OE2	4:4:42:ARG:HG3	2.21	0.40
1:1:45:VAL:N	3:3:114:ARG:HH12	2.12	0.40
1:1:155:PRO:HG2	1:1:163:TRP:CZ2	2.56	0.40
1:1:255:ARG:NH1	1:1:265:THR:O	2.36	0.40
2:2:37:VAL:CG2	3:3:37:PRO:HB3	2.47	0.40
2:2:54:THR:HG22	2:2:253:PHE:HB2	2.03	0.40
3:3:14:MET:C	3:3:16:THR:N	2.74	0.40
3:3:53:ILE:HD11	3:3:213:VAL:HB	2.04	0.40
3:3:141:PRO:CG	3:3:147:ALA:HB2	2.50	0.40
1:1:33:LEU:HB3	3:3:163:ILE:CD1	2.51	0.40
1:1:197:TYR:CE1	2:2:217:HIS:CE1	3.09	0.40
2:2:61:ASN:HD22	2:2:250:CYS:N	2.19	0.40
3:3:75:GLN:HE21	3:3:76:THR:H	1.69	0.40
3:3:83:PHE:N	3:3:83:PHE:CD1	2.88	0.40
1:1:70:PHE:O	1:1:112:LYS:HE2	2.21	0.40
1:1:244:LYS:HZ1	4:4:38:SER:H	1.70	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:192:ASN:HD21	3:3:120:CYS:HA	1.86	0.40
2:2:228:SER:HA	2:2:229:PRO:HD2	1.68	0.40
3:3:82:VAL:CG1	3:3:83:PHE:CD1	2.94	0.40
1:1:15:LEU:O	1:1:61:THR:HA	2.21	0.40
1:1:22:GLU:CB	1:1:54:ARG:O	2.69	0.40
1:1:84:VAL:CG1	1:1:85:ASP:H	2.34	0.40
1:1:86:TYR:OH	1:1:229:GLN:HB2	2.20	0.40
1:1:252:ARG:HB3	1:1:253:PRO:HD2	2.04	0.40
3:3:53:ILE:HG13	3:3:212:PHE:HA	2.03	0.40
3:3:94:LEU:HA	3:3:94:LEU:HD23	1.83	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:113:ASN:OD1	3:3:195:THR:OG1[3_665]	2.11	0.09
1:1:25:HIS:CB	2:2:17:THR:O[2_655]	2.16	0.04

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	1	281/287 (98%)	207 (74%)	49 (17%)	25 (9%)	1 12
2	2	251/263 (95%)	200 (80%)	36 (14%)	15 (6%)	1 20
3	3	236/238 (99%)	179 (76%)	37 (16%)	20 (8%)	1 12
4	4	17/44 (39%)	9 (53%)	7 (41%)	1 (6%)	1 21
All	All	785/832 (94%)	595 (76%)	129 (16%)	61 (8%)	1 15

All (61) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	1	59	SER
1	1	72	GLY
1	1	102	THR
1	1	104	GLN
1	1	107	ALA
1	1	108	GLN
1	1	114	GLU
1	1	150	PRO
1	1	158	ARG
1	1	212	VAL
1	1	219	THR
1	1	226	THR
2	2	145	LYS
2	2	157	SER
2	2	258	ALA
3	3	57	ASN
3	3	88	ASP
3	3	89	ILE
3	3	94	LEU
3	3	96	THR
1	1	29	ASN
1	1	37	ALA
1	1	67	ILE
1	1	90	ASN
1	1	99	TRP
1	1	227	GLU
2	2	91	ILE
2	2	129	GLU
2	2	155	ASP
2	2	193	LEU
2	2	208	ALA
2	2	257	ARG
3	3	59	GLY
3	3	66	SER
3	3	67	MET
3	3	95	ALA
3	3	161	SER
3	3	174	HIS
3	3	184	SER
1	1	6	TYR
1	1	137	ASP
2	2	30	ASN
2	2	156	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	3	74	ASN
3	3	159	LEU
3	3	201	PRO
3	3	219	PHE
3	3	229	LEU
4	4	27	PHE
1	1	160	ASP
1	1	266	ASN
2	2	260	ASN
1	1	101	ILE
1	1	205	THR
1	1	268	MET
2	2	87	LYS
2	2	259	LYS
3	3	220	CYS
2	2	44	PRO
3	3	121	GLY
3	3	82	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	1	254/258 (98%)	181 (71%)	73 (29%)	0 2
2	2	219/227 (96%)	159 (73%)	60 (27%)	0 3
3	3	209/209 (100%)	157 (75%)	52 (25%)	0 4
4	4	15/35 (43%)	9 (60%)	6 (40%)	0 0
All	All	697/729 (96%)	506 (73%)	191 (27%)	0 3

All (191) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	1	5	ASN
1	1	6	TYR
1	1	7	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	15	LEU
1	1	19	ASN
1	1	26	THR
1	1	35	ASP
1	1	44	ASN
1	1	54	ARG
1	1	60	GLN
1	1	73	ARG
1	1	87	THR
1	1	89	TYR
1	1	90	ASN
1	1	97	THR
1	1	100	LYS
1	1	101	ILE
1	1	102	THR
1	1	108	GLN
1	1	109	ILE
1	1	112	LYS
1	1	119	VAL
1	1	121	PHE
1	1	122	ASP
1	1	123	SER
1	1	124	GLU
1	1	126	THR
1	1	127	LEU
1	1	134	ARG
1	1	141	ILE
1	1	142	VAL
1	1	143	MET
1	1	145	TYR
1	1	146	MET
1	1	157	LYS
1	1	158	ARG
1	1	160	ASP
1	1	161	PHE
1	1	162	SER
1	1	173	TRP
1	1	174	GLN
1	1	182	PHE
1	1	186	PHE
1	1	197	TYR
1	1	201	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	204	ASN
1	1	209	TYR
1	1	212	VAL
1	1	215	ASN
1	1	216	ASP
1	1	217	MET
1	1	219	THR
1	1	223	ARG
1	1	224	ILE
1	1	226	THR
1	1	227	GLU
1	1	228	LYS
1	1	232	SER
1	1	236	THR
1	1	237	THR
1	1	246	THR
1	1	247	LYS
1	1	250	CYS
1	1	252	ARG
1	1	259	TYR
1	1	265	THR
1	1	274	VAL
1	1	275	THR
1	1	276	THR
1	1	278	ILE
1	1	279	VAL
1	1	281	ARG
1	1	286	THR
2	2	12	ARG
2	2	15	GLN
2	2	17	THR
2	2	18	ARG
2	2	25	SER
2	2	27	ASP
2	2	30	ASN
2	2	43	THR
2	2	51	ASN
2	2	52	LYS
2	2	55	GLN
2	2	58	THR
2	2	60	SER
2	2	62	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	2	63	PHE
2	2	65	THR
2	2	68	SER
2	2	72	ASN
2	2	75	SER
2	2	78	TRP
2	2	86	LEU
2	2	87	LYS
2	2	88	ASP
2	2	94	GLU
2	2	103	ARG
2	2	111	GLN
2	2	116	LYS
2	2	126	MET
2	2	136	LYS
2	2	139	SER
2	2	145	LYS
2	2	146	LEU
2	2	154	ARG
2	2	158	GLN
2	2	159	GLU
2	2	160	ARG
2	2	164	LEU
2	2	170	ASP
2	2	171	SER
2	2	175	PHE
2	2	180	LEU
2	2	191	ILE
2	2	192	ASN
2	2	194	ARG
2	2	195	SER
2	2	197	ASN
2	2	198	SER
2	2	200	THR
2	2	201	LEU
2	2	202	ILE
2	2	206	VAL
2	2	207	ASN
2	2	216	ARG
2	2	219	ASN
2	2	224	ILE
2	2	239	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	2	240	VAL
2	2	257	ARG
2	2	261	ILE
2	2	262	LYS
3	3	2	LEU
3	3	4	VAL
3	3	5	TYR
3	3	7	THR
3	3	19	MET
3	3	21	SER
3	3	23	CYS
3	3	32	LYS
3	3	39	GLU
3	3	50	ASP
3	3	55	VAL
3	3	56	ASN
3	3	60	ASN
3	3	61	ASN
3	3	65	VAL
3	3	66	SER
3	3	75	GLN
3	3	84	SER
3	3	90	THR
3	3	92	THR
3	3	99	ILE
3	3	116	SER
3	3	119	PHE
3	3	126	THR
3	3	127	LEU
3	3	134	THR
3	3	140	GLU
3	3	142	THR
3	3	143	THR
3	3	148	MET
3	3	157	VAL
3	3	159	LEU
3	3	161	SER
3	3	177	LEU
3	3	182	LYS
3	3	189	ILE
3	3	192	TRP
3	3	194	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	3	196	ASN
3	3	201	PRO
3	3	205	GLN
3	3	208	ASP
3	3	209	MET
3	3	210	LEU
3	3	211	CYS
3	3	212	PHE
3	3	213	VAL
3	3	216	CYS
3	3	217	LYS
3	3	228	ASP
3	3	231	ILE
3	3	236	ILE
4	4	26	TYR
4	4	29	ILE
4	4	33	LYS
4	4	42	ARG
4	4	43	LEU
4	4	44	ASP

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

Mol	Chain	Res	Type
1	1	90	ASN
1	1	95	ASN
1	1	140	HIS
1	1	159	ASN
1	1	204	ASN
1	1	215	ASN
1	1	261	HIS
1	1	282	ASN
2	2	15	GLN
2	2	30	ASN
2	2	51	ASN
2	2	72	ASN
2	2	109	HIS
2	2	111	GLN
2	2	131	GLN
2	2	192	ASN
2	2	197	ASN
2	2	207	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	2	218	ASN
2	2	219	ASN
3	3	20	GLN
3	3	42	ASN
3	3	56	ASN
3	3	57	ASN
3	3	61	ASN
3	3	75	GLN
3	3	80	GLN
3	3	124	ASN
3	3	194	GLN
3	3	196	ASN
4	4	28	ASN
4	4	30	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains (i)

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
5	W91	1	700	-	22,25,25	3.19	5 (22%)	29,34,34	2.61	6 (20%)

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
5	W91	1	700	-	-	2/10/18/18	0/3/3/3

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1	700	W91	C2A-N3A	12.04	1.43	1.27
5	1	700	W91	C4A-N3A	-6.33	1.36	1.47
5	1	700	W91	C4-C5	-3.72	1.34	1.39
5	1	700	W91	O1A-C5A	-3.04	1.38	1.46
5	1	700	W91	O1A-C2A	-2.80	1.31	1.36

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1	700	W91	O1A-C2A-N3A	-9.33	110.21	118.23
5	1	700	W91	C4A-N3A-C2A	6.10	112.22	106.77
5	1	700	W91	O1A-C2A-C4B	5.24	122.79	115.85
5	1	700	W91	O1A-C5A-C4A	3.71	111.85	104.28
5	1	700	W91	C1C-C5-C4	2.48	135.02	128.60
5	1	700	W91	C5A-C4A-N3A	-2.03	99.50	104.35

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	1	700	W91	C5-C1C-C2C-C3C
5	1	700	W91	C2C-C1C-C5-C4

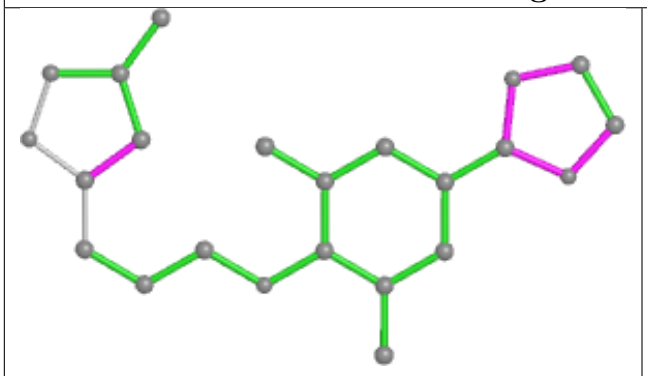
There are no ring outliers.

1 monomer is involved in 8 short contacts:

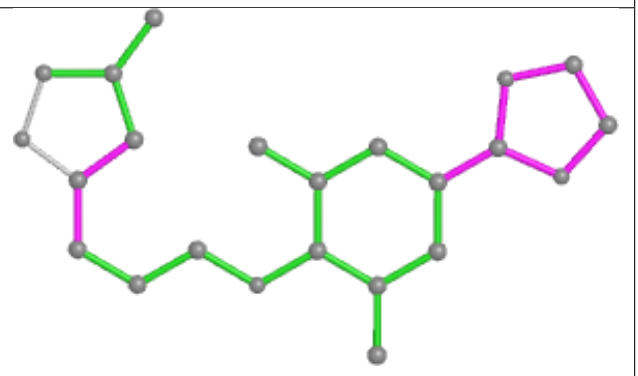
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	1	700	W91	8	0

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

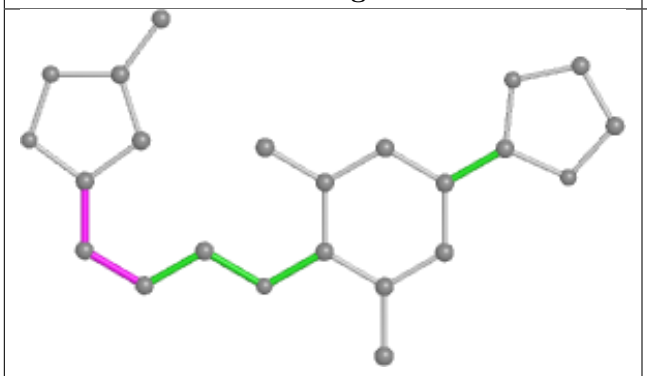
Ligand W91 1 700



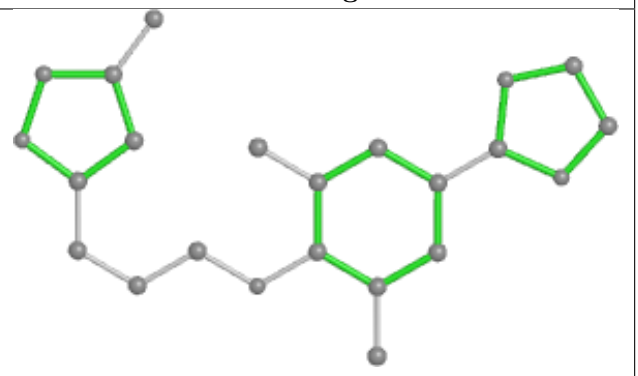
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	1	4

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	1	213:VAL	C	214:THR	N	1.61
1	1	146:MET	C	147:TYR	N	1.20
1	1	118:TYR	C	119:VAL	N	1.19
1	1	98:LYS	C	99:TRP	N	1.15

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

6.2 Non-standard residues in protein, DNA, RNA chains

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.