



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 25, 2026 – 10:06 PM EDT

PDB ID : 3SKG / pdb_00003skg
Title : Crystal structure of beta-site app-cleaving enzyme 1 (BACE-WT) complex with (2S)-2-((3R)-3-acetamido-3-isobutyl-2-oxo-1-pyrrolidiny1)-N-((1S,2R)-1-(3,5-difluorobenzyl)-2-hydroxy-2-(1,2,3,4-tetrahydro-3-isoquinoliny1)ethyl)-4-phenylbutanamide
Authors : Muckelbauer, J.K.
Deposited on : 2011-06-22
Resolution : 2.88 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](#) ①) were used in the production of this report:

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

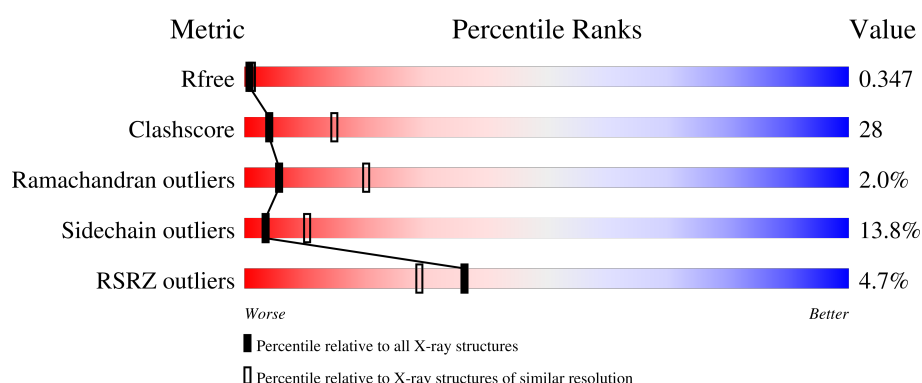
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.88 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3557 (2.90-2.86)
Clashscore	190562	3801 (2.90-2.86)
Ramachandran outliers	187476	3699 (2.90-2.86)
Sidechain outliers	187428	3702 (2.90-2.86)
RSRZ outliers	180081	3558 (2.90-2.86)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	455	
1	B	455	
1	D	455	
1	E	455	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 12434 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 Beta-secretase 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	386	Total	C	N	O	S	0	0	0
			3034	1944	503	573	14			
1	B	386	Total	C	N	O	S	0	0	0
			3034	1944	503	573	14			
1	D	386	Total	C	N	O	S	0	0	0
			3034	1944	503	573	14			
1	E	386	Total	C	N	O	S	0	0	0
			3034	1944	503	573	14			

There are 56 discrepancies between the modelled and reference sequences:

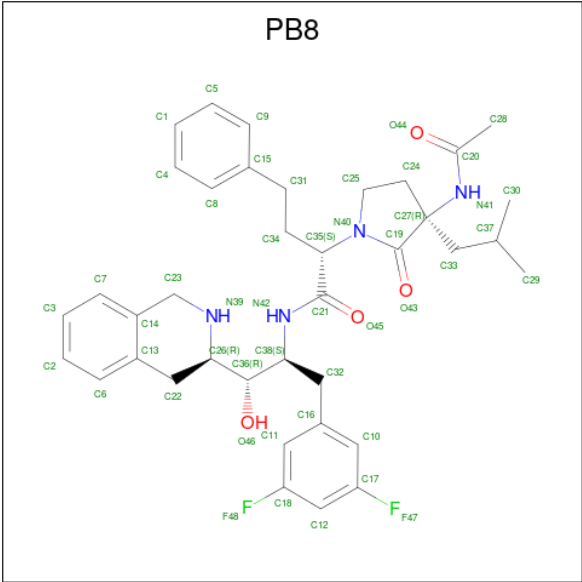
Chain	Residue	Modelled	Actual	Comment	Reference
A	-61	MET	-	expression tag	UNP P56817
A	-60	ALA	-	expression tag	UNP P56817
A	-59	SER	-	expression tag	UNP P56817
A	-58	MET	-	expression tag	UNP P56817
A	-57	THR	-	expression tag	UNP P56817
A	-56	GLY	-	expression tag	UNP P56817
A	-55	GLY	-	expression tag	UNP P56817
A	-54	GLN	-	expression tag	UNP P56817
A	-53	GLN	-	expression tag	UNP P56817
A	-52	MET	-	expression tag	UNP P56817
A	-51	GLY	-	expression tag	UNP P56817
A	-50	ARG	-	expression tag	UNP P56817
A	-49	GLY	-	expression tag	UNP P56817
A	-48	SER	-	expression tag	UNP P56817
B	-61	MET	-	expression tag	UNP P56817
B	-60	ALA	-	expression tag	UNP P56817
B	-59	SER	-	expression tag	UNP P56817
B	-58	MET	-	expression tag	UNP P56817
B	-57	THR	-	expression tag	UNP P56817
B	-56	GLY	-	expression tag	UNP P56817
B	-55	GLY	-	expression tag	UNP P56817

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
B	-54	GLN	-	expression tag	UNP P56817
B	-53	GLN	-	expression tag	UNP P56817
B	-52	MET	-	expression tag	UNP P56817
B	-51	GLY	-	expression tag	UNP P56817
B	-50	ARG	-	expression tag	UNP P56817
B	-49	GLY	-	expression tag	UNP P56817
B	-48	SER	-	expression tag	UNP P56817
D	-61	MET	-	expression tag	UNP P56817
D	-60	ALA	-	expression tag	UNP P56817
D	-59	SER	-	expression tag	UNP P56817
D	-58	MET	-	expression tag	UNP P56817
D	-57	THR	-	expression tag	UNP P56817
D	-56	GLY	-	expression tag	UNP P56817
D	-55	GLY	-	expression tag	UNP P56817
D	-54	GLN	-	expression tag	UNP P56817
D	-53	GLN	-	expression tag	UNP P56817
D	-52	MET	-	expression tag	UNP P56817
D	-51	GLY	-	expression tag	UNP P56817
D	-50	ARG	-	expression tag	UNP P56817
D	-49	GLY	-	expression tag	UNP P56817
D	-48	SER	-	expression tag	UNP P56817
E	-61	MET	-	expression tag	UNP P56817
E	-60	ALA	-	expression tag	UNP P56817
E	-59	SER	-	expression tag	UNP P56817
E	-58	MET	-	expression tag	UNP P56817
E	-57	THR	-	expression tag	UNP P56817
E	-56	GLY	-	expression tag	UNP P56817
E	-55	GLY	-	expression tag	UNP P56817
E	-54	GLN	-	expression tag	UNP P56817
E	-53	GLN	-	expression tag	UNP P56817
E	-52	MET	-	expression tag	UNP P56817
E	-51	GLY	-	expression tag	UNP P56817
E	-50	ARG	-	expression tag	UNP P56817
E	-49	GLY	-	expression tag	UNP P56817
E	-48	SER	-	expression tag	UNP P56817

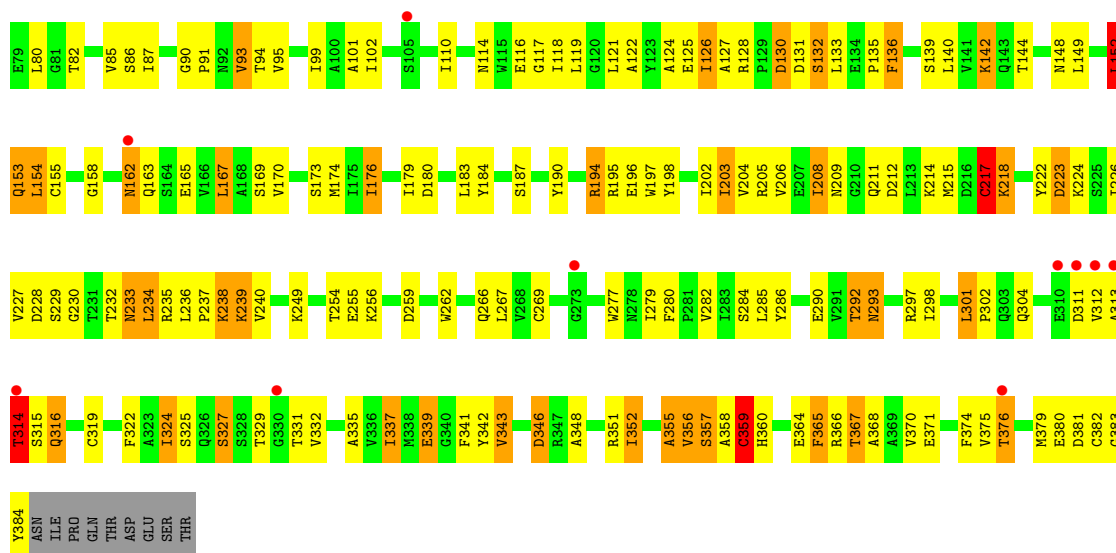
- Molecule 2 is (2S)-2-[(3R)-3-(acetylamino)-3-(2-methylpropyl)-2-oxopyrrolidin-1-yl]-N-[(1R,2S)-3-(3,5-difluorophenyl)-1-hydroxy-1-[(3R)-1,2,3,4-tetrahydroisoquinolin-3-yl]propan-2-yl]-4-phenylbutanamide (CCD ID: PB8) (formula: C₃₈H₄₆F₂N₄O₄).



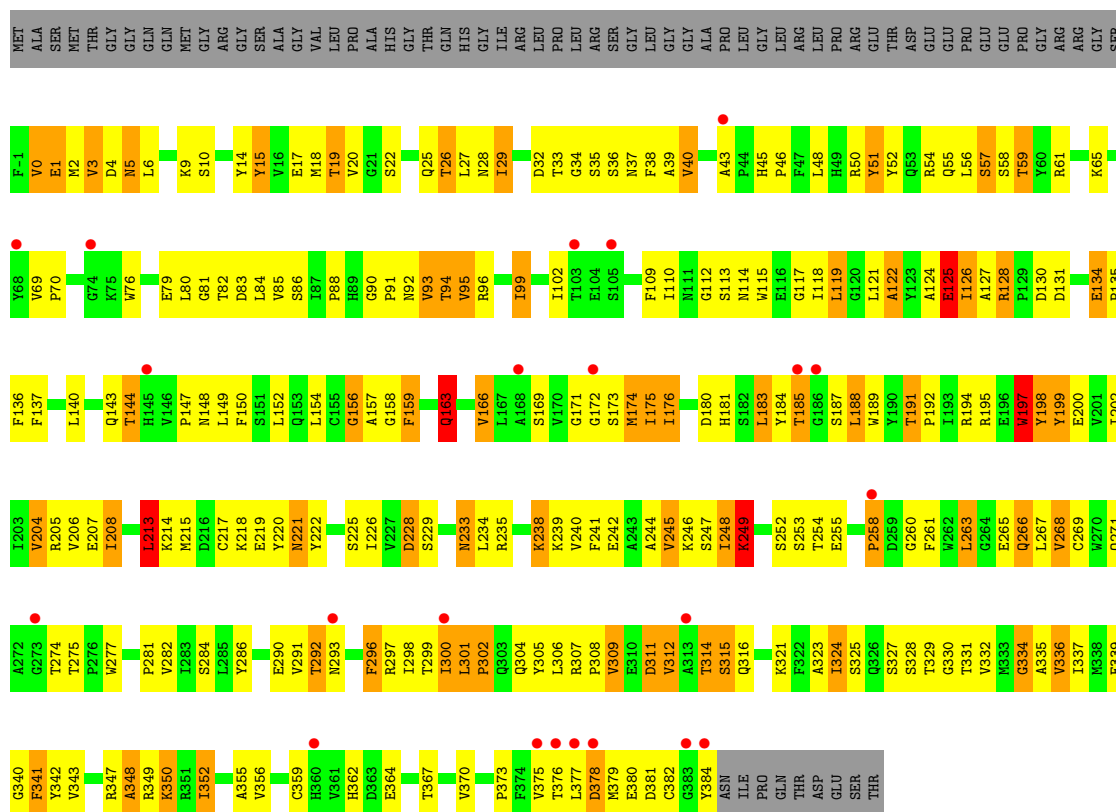
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	F	N	O	0	0
			48	38	2	4	4		
2	B	1	Total	C	F	N	O	0	0
			48	38	2	4	4		
2	D	1	Total	C	F	N	O	0	0
			48	38	2	4	4		
2	E	1	Total	C	F	N	O	0	0
			48	38	2	4	4		

- Molecule 3 is water.

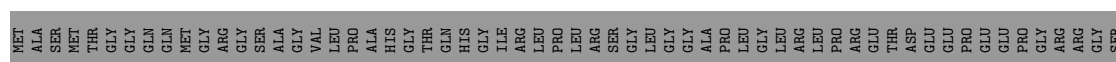
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	24	Total	O	0	0
			24	24		
3	B	38	Total	O	0	0
			38	38		
3	D	20	Total	O	0	0
			20	20		
3	E	24	Total	O	0	0
			24	24		

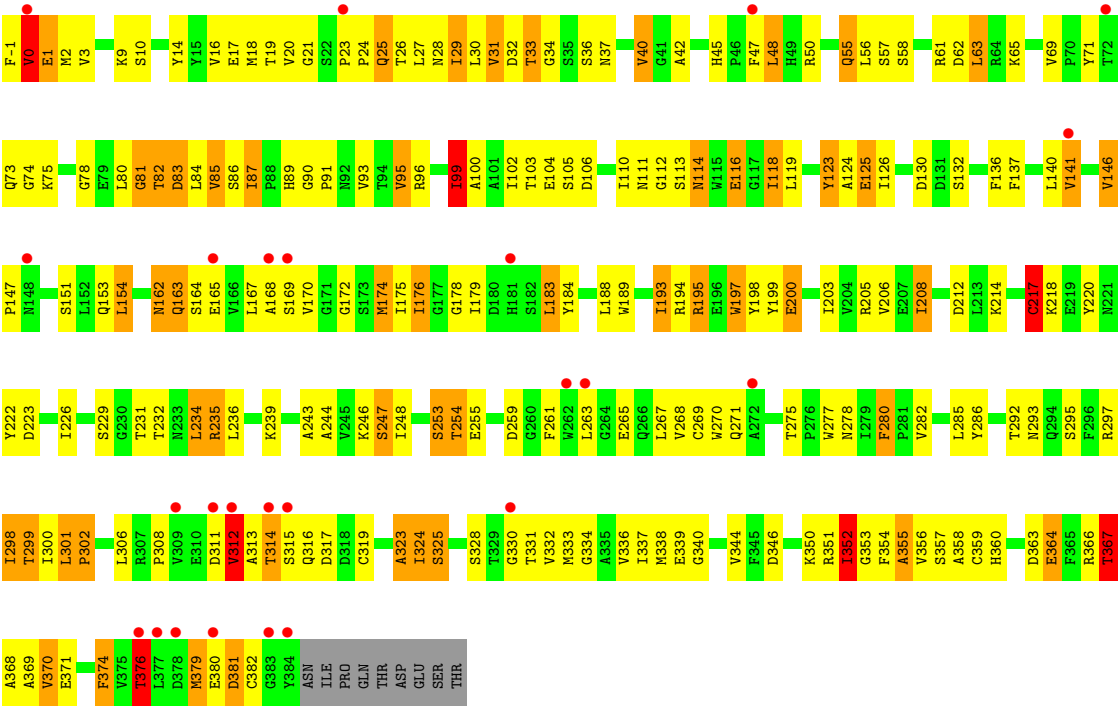


• Molecule 1: Beta-secretase 1



• Molecule 1: Beta-secretase 1





4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	86.24Å 130.45Å 86.87Å 90.00° 96.65° 90.00°	Depositor
Resolution (Å)	30.63 – 2.88 30.63 – 2.88	Depositor EDS
% Data completeness (in resolution range)	98.8 (30.63-2.88) 98.9 (30.63-2.88)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.48 (at 2.90Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.255 , 0.348 0.256 , 0.347	Depositor DCC
R_{free} test set	2159 reflections (5.04%)	wwPDB-VP
Wilson B-factor (Å ²)	32.1	Xtriage
Anisotropy	0.121	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.38 , 44.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	0.029 for l,-k,h	Xtriage
F_o, F_c correlation	0.86	EDS
Total number of atoms	12434	wwPDB-VP
Average B, all atoms (Å ²)	21.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 22.23 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 5.9537e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: PB8

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	1.67	30/3112 (1.0%)	1.56	40/4232 (0.9%)
1	B	1.69	34/3112 (1.1%)	1.57	37/4232 (0.9%)
1	D	1.66	37/3112 (1.2%)	1.58	41/4232 (1.0%)
1	E	1.69	39/3112 (1.3%)	1.61	48/4232 (1.1%)
All	All	1.68	140/12448 (1.1%)	1.58	166/16928 (1.0%)

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	D	0	1

All (140) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	227	VAL	CA-CB	-8.91	1.43	1.53
1	A	298	ILE	CA-CB	8.23	1.64	1.54
1	D	152	LEU	CA-C	7.99	1.62	1.52
1	A	314	THR	CA-CB	7.90	1.64	1.53
1	D	35	SER	C-O	7.73	1.32	1.23
1	D	126	ILE	N-CA	7.57	1.54	1.46
1	A	359	CYS	CB-SG	-7.30	1.57	1.81
1	E	370	VAL	CA-CB	7.28	1.62	1.53
1	D	245	VAL	CA-CB	7.23	1.64	1.54
1	E	376	THR	C-O	7.21	1.32	1.23
1	E	114	ASN	CA-C	7.18	1.62	1.52
1	D	199	TYR	CA-CB	7.17	1.62	1.53
1	D	69	VAL	CA-CB	7.11	1.60	1.54
1	E	168	ALA	N-CA	7.07	1.55	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	231	THR	CA-CB	-7.01	1.43	1.53
1	B	139	SER	CA-C	6.98	1.62	1.52
1	A	341	PHE	N-CA	6.98	1.54	1.45
1	B	203	ILE	CA-CB	6.94	1.62	1.54
1	A	18	MET	CA-C	6.86	1.61	1.52
1	B	312	VAL	CA-C	6.82	1.60	1.52
1	B	139	SER	N-CA	-6.74	1.37	1.46
1	D	300	ILE	CA-CB	6.74	1.63	1.54
1	D	171	GLY	C-O	-6.69	1.19	1.24
1	D	308	PRO	CA-C	6.69	1.60	1.52
1	A	200	GLU	CA-C	-6.55	1.44	1.52
1	B	73	GLN	C-O	6.53	1.31	1.24
1	E	312	VAL	CA-CB	6.52	1.63	1.54
1	A	162	ASN	N-CA	6.49	1.54	1.45
1	D	348	ALA	CA-CB	6.49	1.64	1.53
1	B	352	ILE	CA-CB	6.46	1.61	1.54
1	E	333	MET	CA-C	-6.41	1.44	1.52
1	E	1	GLU	CA-C	6.41	1.61	1.52
1	D	213	LEU	CA-C	6.35	1.61	1.52
1	D	99	ILE	CA-CB	6.30	1.62	1.54
1	D	57	SER	N-CA	-6.26	1.39	1.46
1	E	356	VAL	CA-C	-6.25	1.46	1.52
1	E	313	ALA	CA-C	6.18	1.60	1.53
1	B	279	ILE	N-CA	6.17	1.54	1.46
1	B	314	THR	CA-C	6.17	1.61	1.52
1	E	69	VAL	CA-CB	6.16	1.62	1.54
1	D	94	THR	CA-C	6.10	1.59	1.52
1	E	314	THR	CA-C	6.05	1.60	1.52
1	A	103	THR	N-CA	5.95	1.53	1.46
1	A	67	VAL	CA-CB	5.95	1.62	1.54
1	E	226	ILE	N-CA	-5.93	1.39	1.46
1	E	312	VAL	N-CA	5.93	1.53	1.46
1	B	376	THR	CA-CB	5.92	1.62	1.53
1	B	37	ASN	CA-C	-5.89	1.45	1.52
1	D	350	LYS	CA-C	5.87	1.60	1.53
1	E	162	ASN	N-CA	5.86	1.53	1.45
1	E	367	THR	CA-CB	5.86	1.63	1.53
1	B	126	ILE	CA-CB	5.83	1.61	1.54
1	E	0	VAL	CA-CB	5.82	1.62	1.54
1	A	152	LEU	CA-C	5.79	1.59	1.52
1	E	29	ILE	CA-C	5.77	1.59	1.52
1	B	130	ASP	N-CA	5.76	1.53	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	292	THR	CA-C	5.72	1.60	1.52
1	E	146	VAL	CA-CB	5.71	1.61	1.54
1	A	308	PRO	CA-C	5.68	1.60	1.52
1	B	101	ALA	CA-CB	-5.68	1.45	1.53
1	E	82	THR	N-CA	5.68	1.52	1.45
1	D	198	TYR	CA-C	-5.67	1.45	1.53
1	D	208	ILE	CA-CB	-5.65	1.46	1.53
1	E	312	VAL	CA-C	5.65	1.59	1.52
1	D	19	THR	CA-C	5.64	1.59	1.52
1	E	331	THR	CA-CB	5.63	1.61	1.53
1	A	27	LEU	CA-C	5.61	1.59	1.52
1	B	238	LYS	CA-C	5.58	1.60	1.52
1	B	355	ALA	CA-CB	-5.58	1.43	1.53
1	E	364	GLU	CA-C	5.58	1.60	1.52
1	B	324	ILE	CA-CB	5.56	1.61	1.54
1	E	217	CYS	CB-SG	-5.56	1.62	1.81
1	E	355	ALA	CA-CB	-5.55	1.44	1.53
1	B	311	ASP	CA-C	5.54	1.59	1.52
1	B	359	CYS	CB-SG	-5.53	1.62	1.81
1	D	39	ALA	CA-C	5.52	1.59	1.52
1	E	376	THR	CA-CB	5.50	1.62	1.53
1	D	79	GLU	CA-C	5.49	1.59	1.52
1	D	323	ALA	CA-C	-5.49	1.46	1.53
1	D	282	VAL	CA-CB	-5.49	1.47	1.54
1	A	9	LYS	CA-C	5.48	1.59	1.52
1	E	103	THR	CA-C	5.47	1.59	1.52
1	B	319	CYS	N-CA	5.45	1.52	1.45
1	D	180	ASP	N-CA	5.45	1.52	1.46
1	B	292	THR	CA-CB	5.43	1.61	1.53
1	D	336	VAL	CA-CB	5.43	1.62	1.54
1	B	364	GLU	CG-CD	5.43	1.65	1.52
1	B	356	VAL	CA-CB	5.42	1.60	1.53
1	A	364	GLU	CG-CD	5.41	1.65	1.52
1	E	313	ALA	N-CA	5.38	1.52	1.46
1	A	248	ILE	CA-CB	5.38	1.61	1.54
1	E	319	CYS	CA-C	5.36	1.59	1.52
1	B	170	VAL	CA-C	5.34	1.58	1.52
1	B	313	ALA	N-CA	5.33	1.52	1.46
1	A	32	ASP	CA-C	-5.31	1.47	1.53
1	A	376	THR	CA-CB	5.31	1.61	1.53
1	B	121	LEU	N-CA	5.31	1.53	1.46
1	D	119	LEU	N-CA	-5.29	1.40	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	162	ASN	N-CA	5.26	1.52	1.45
1	D	69	VAL	N-CA	5.25	1.50	1.46
1	B	122	ALA	N-CA	-5.25	1.39	1.46
1	D	39	ALA	C-O	5.25	1.29	1.23
1	E	314	THR	CA-CB	5.24	1.62	1.53
1	E	118	ILE	N-CA	5.24	1.52	1.46
1	A	225	SER	CA-C	-5.21	1.46	1.52
1	A	279	ILE	CA-CB	5.21	1.60	1.54
1	A	376	THR	C-O	5.20	1.30	1.23
1	B	316	GLN	N-CA	5.19	1.53	1.46
1	D	340	GLY	N-CA	5.19	1.52	1.45
1	B	339	GLU	N-CA	5.17	1.52	1.46
1	D	57	SER	CA-C	-5.16	1.46	1.53
1	A	203	ILE	N-CA	5.14	1.52	1.46
1	E	62	ASP	CB-CG	5.13	1.64	1.52
1	D	343	VAL	N-CA	5.13	1.53	1.46
1	D	268	VAL	CA-CB	-5.13	1.47	1.55
1	E	374	PHE	CA-C	-5.13	1.46	1.52
1	A	334	GLY	C-O	5.13	1.28	1.23
1	D	309	VAL	CA-CB	5.12	1.62	1.54
1	E	308	PRO	N-CA	5.12	1.53	1.47
1	A	190	TYR	N-CA	5.12	1.52	1.46
1	E	62	ASP	CA-CB	5.11	1.59	1.52
1	E	236	LEU	CA-C	5.11	1.57	1.52
1	D	1	GLU	N-CA	5.09	1.52	1.46
1	B	114	ASN	N-CA	5.08	1.52	1.46
1	B	152	LEU	N-CA	-5.08	1.40	1.46
1	E	206	VAL	CA-CB	5.08	1.61	1.54
1	E	73	GLN	C-O	5.07	1.29	1.23
1	A	30	LEU	C-O	5.07	1.29	1.23
1	A	192	PRO	C-N	5.07	1.38	1.33
1	A	119	LEU	C-O	5.07	1.29	1.23
1	B	14	TYR	N-CA	5.07	1.52	1.46
1	A	233	ASN	CB-CG	-5.06	1.39	1.52
1	E	355	ALA	CA-C	-5.06	1.46	1.52
1	D	258	PRO	CA-C	5.05	1.59	1.52
1	A	355	ALA	CA-C	-5.04	1.46	1.52
1	D	185	THR	CA-C	5.04	1.59	1.53
1	A	209	ASN	CA-C	-5.03	1.46	1.53
1	B	127	ALA	CA-CB	-5.02	1.45	1.53
1	D	43	ALA	C-N	5.01	1.39	1.33
1	D	181	HIS	N-CA	5.01	1.52	1.46

All (166) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	29	ILE	N-CA-C	9.91	121.99	108.11
1	B	227	VAL	CB-CA-C	-9.43	99.27	111.25
1	E	328	SER	N-CA-C	-9.16	102.11	113.38
1	E	184	TYR	N-CA-C	8.71	121.15	108.86
1	D	301	LEU	CA-C-N	8.69	129.55	119.47
1	D	301	LEU	C-N-CA	8.69	129.55	119.47
1	E	325	SER	N-CA-C	8.58	121.74	108.96
1	A	326	GLN	N-CA-C	8.37	122.30	110.50
1	A	85	VAL	N-CA-C	8.23	120.33	108.48
1	B	142	LYS	N-CA-C	-8.18	103.44	113.50
1	E	178	GLY	N-CA-C	8.13	126.58	110.97
1	B	217	CYS	CA-CB-SG	-8.02	95.96	114.40
1	D	15	TYR	N-CA-C	7.98	121.29	109.24
1	D	340	GLY	N-CA-C	7.84	124.38	114.66
1	E	169	SER	N-CA-C	7.71	120.83	110.35
1	B	365	PHE	N-CA-C	7.69	122.79	113.41
1	B	312	VAL	N-CA-C	7.67	118.21	110.23
1	B	234	LEU	N-CA-C	-7.64	98.36	109.59
1	E	125	GLU	CA-C-N	-7.55	112.90	122.26
1	E	125	GLU	C-N-CA	-7.55	112.90	122.26
1	E	118	ILE	N-CA-C	7.54	118.60	108.27
1	A	352	ILE	N-CA-C	7.38	118.50	108.17
1	D	134	GLU	CA-C-N	7.34	127.25	120.21
1	D	134	GLU	C-N-CA	7.34	127.25	120.21
1	A	233	ASN	N-CA-C	7.29	121.16	110.59
1	D	152	LEU	N-CA-C	7.25	120.71	108.90
1	D	191	THR	CA-C-N	7.19	128.32	119.98
1	D	191	THR	C-N-CA	7.19	128.32	119.98
1	E	217	CYS	CA-CB-SG	-7.15	97.95	114.40
1	E	87	ILE	N-CA-C	7.04	115.12	108.15
1	D	233	ASN	N-CA-C	7.01	120.01	110.55
1	B	23	PRO	CA-C-N	6.91	127.99	119.98
1	B	23	PRO	C-N-CA	6.91	127.99	119.98
1	E	175	ILE	CB-CA-C	-6.91	102.48	111.25
1	D	249	LYS	N-CA-C	-6.90	103.69	111.07
1	A	247	SER	N-CA-C	6.87	118.56	111.14
1	A	252	SER	N-CA-C	-6.85	105.70	112.97
1	D	228	ASP	N-CA-C	6.77	118.49	107.32
1	E	58	SER	N-CA-C	6.75	120.39	111.75
1	E	235	ARG	NE-CZ-NH2	6.75	125.27	119.20
1	D	293	ASN	N-CA-C	6.71	120.83	112.24
1	B	255	GLU	N-CA-C	-6.68	99.19	109.14

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	346	ASP	CA-C-N	6.65	129.52	120.54
1	B	346	ASP	C-N-CA	6.65	129.52	120.54
1	A	280	PHE	N-CA-C	6.58	118.37	110.07
1	E	298	ILE	N-CA-C	6.55	117.33	108.17
1	A	351	ARG	CA-C-N	-6.49	115.14	123.19
1	A	351	ARG	C-N-CA	-6.49	115.14	123.19
1	A	381	ASP	N-CA-C	6.47	120.99	111.87
1	E	112	GLY	N-CA-C	-6.46	106.31	115.30
1	B	316	GLN	N-CA-C	6.37	120.31	112.54
1	B	381	ASP	N-CA-C	6.36	119.97	112.72
1	D	183	LEU	N-CA-C	-6.34	105.58	113.38
1	B	196	GLU	CA-C-O	-6.34	115.08	122.37
1	D	180	ASP	N-CA-C	6.31	119.02	108.73
1	B	290	GLU	N-CA-C	6.30	118.23	111.36
1	E	40	VAL	CB-CA-C	-6.25	99.23	110.48
1	E	146	VAL	CA-C-N	6.20	126.21	119.89
1	E	146	VAL	C-N-CA	6.20	126.21	119.89
1	B	194	ARG	N-CA-C	6.17	118.08	111.36
1	A	56	LEU	N-CA-C	6.15	120.81	112.88
1	E	339	GLU	N-CA-C	6.15	119.62	111.75
1	A	359	CYS	CA-CB-SG	-6.14	100.28	114.40
1	B	14	TYR	N-CA-C	6.13	118.95	109.07
1	A	231	THR	N-CA-C	6.12	118.38	108.41
1	A	363	ASP	N-CA-C	-6.11	100.04	109.14
1	E	323	ALA	CA-C-N	-6.11	114.45	122.94
1	E	323	ALA	C-N-CA	-6.11	114.45	122.94
1	A	361	VAL	CB-CA-C	-6.07	104.68	111.23
1	D	334	GLY	N-CA-C	-6.07	105.51	112.79
1	E	81	GLY	N-CA-C	-6.01	101.48	110.38
1	B	158	GLY	N-CA-C	-6.01	107.11	114.92
1	A	72	THR	CB-CA-C	5.99	120.28	110.88
1	B	293	ASN	N-CA-C	5.96	119.86	112.58
1	E	356	VAL	N-CA-C	-5.93	101.88	109.30
1	A	200	GLU	N-CA-C	-5.92	99.54	109.07
1	E	328	SER	CA-C-O	5.89	125.86	119.15
1	E	352	ILE	N-CA-C	5.89	116.58	107.99
1	B	72	THR	N-CA-C	-5.88	104.23	111.40
1	E	89	HIS	N-CA-C	-5.86	101.44	109.71
1	A	292	THR	N-CA-C	-5.86	101.98	110.24
1	B	343	VAL	CB-CA-C	-5.84	102.47	110.77
1	E	23	PRO	CA-C-N	-5.84	113.52	119.83
1	E	23	PRO	C-N-CA	-5.84	113.52	119.83

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	203	ILE	CB-CA-C	-5.81	103.59	111.15
1	E	33	THR	N-CA-C	-5.81	105.35	113.37
1	D	156	GLY	N-CA-C	5.79	119.62	112.14
1	A	341	PHE	N-CA-C	5.77	118.97	109.85
1	D	163	GLN	N-CA-C	5.74	118.00	111.11
1	A	110	ILE	CB-CA-C	5.74	118.45	110.99
1	E	235	ARG	NE-CZ-NH1	-5.72	115.78	121.50
1	B	357	SER	CA-CB-OG	-5.71	99.69	111.10
1	B	69	VAL	CA-C-N	-5.68	112.74	119.84
1	B	69	VAL	C-N-CA	-5.68	112.74	119.84
1	A	372	GLY	N-CA-C	-5.68	100.76	112.34
1	D	126	ILE	CB-CA-C	-5.67	103.75	110.84
1	A	11	GLY	N-CA-C	5.66	120.89	114.67
1	E	280	PHE	N-CA-C	5.64	116.77	109.72
1	A	128	ARG	N-CA-C	5.62	116.74	109.72
1	E	78	GLY	N-CA-C	5.59	121.29	110.66
1	E	369	ALA	N-CA-C	5.59	117.59	108.76
1	D	158	GLY	CA-C-O	5.56	124.93	119.37
1	D	40	VAL	N-CA-C	5.56	116.75	108.46
1	D	290	GLU	N-CA-C	5.56	117.34	111.28
1	B	136	PHE	N-CA-C	5.55	117.77	111.11
1	D	198	TYR	N-CA-C	-5.53	103.08	110.55
1	D	131	ASP	N-CA-C	5.50	119.49	112.34
1	D	174	MET	CA-C-N	-5.49	115.51	122.37
1	D	174	MET	C-N-CA	-5.49	115.51	122.37
1	E	123	TYR	N-CA-C	5.49	118.92	110.42
1	D	269	CYS	N-CA-C	5.46	118.30	109.40
1	E	302	PRO	N-CA-C	-5.46	107.65	114.20
1	E	172	GLY	N-CA-C	5.46	117.98	110.56
1	A	304	GLN	N-CA-C	-5.44	106.32	113.12
1	D	181	HIS	N-CA-C	5.43	119.00	112.38
1	E	99	ILE	CB-CA-C	-5.43	102.53	110.62
1	E	299	THR	N-CA-C	5.42	117.74	108.90
1	D	335	ALA	N-CA-C	5.41	117.18	111.28
1	E	243	ALA	CA-C-N	5.41	127.79	120.38
1	E	243	ALA	C-N-CA	5.41	127.79	120.38
1	D	5	ASN	N-CA-C	5.40	119.73	113.20
1	B	43	ALA	CA-C-N	5.40	125.41	119.90
1	B	43	ALA	C-N-CA	5.40	125.41	119.90
1	B	208	ILE	N-CA-C	-5.40	99.78	107.77
1	B	78	GLY	N-CA-C	5.40	120.91	110.66
1	B	195	ARG	N-CA-C	-5.39	99.32	110.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	192	PRO	CA-C-O	-5.38	114.85	121.31
1	B	292	THR	CB-CA-C	5.37	118.48	109.89
1	B	99	ILE	CB-CA-C	-5.33	103.21	110.77
1	B	184	TYR	N-CA-C	5.30	117.12	109.07
1	E	234	LEU	N-CA-C	-5.30	100.66	109.46
1	D	39	ALA	N-CA-C	5.27	118.03	108.69
1	B	13	GLY	N-CA-C	5.26	118.70	112.33
1	D	302	PRO	CB-CA-C	-5.25	103.49	112.26
1	D	277	TRP	N-CA-C	-5.23	105.58	111.28
1	A	166	VAL	CA-C-N	5.22	127.28	120.28
1	A	166	VAL	C-N-CA	5.22	127.28	120.28
1	D	126	ILE	N-CA-C	5.19	119.08	113.43
1	D	93	VAL	N-CA-C	5.16	115.61	108.23
1	A	141	VAL	N-CA-C	5.16	116.62	111.00
1	A	93	VAL	N-CA-C	5.16	117.46	108.90
1	E	259	ASP	N-CA-C	5.15	118.67	112.38
1	D	314	THR	CA-C-N	5.15	131.38	121.54
1	D	314	THR	C-N-CA	5.15	131.38	121.54
1	E	269	CYS	N-CA-C	5.15	117.30	108.90
1	A	87	ILE	CB-CA-C	-5.14	106.19	111.08
1	E	174	MET	CB-CG-SD	5.12	128.06	112.70
1	E	313	ALA	N-CA-C	5.12	119.02	112.26
1	B	48	LEU	N-CA-C	5.11	117.30	109.07
1	A	21	GLY	N-CA-C	5.11	118.51	112.33
1	A	173	SER	N-CA-C	5.11	117.77	109.24
1	A	234	LEU	N-CA-C	-5.10	100.76	108.67
1	D	265	GLU	N-CA-C	5.10	119.46	112.68
1	D	364	GLU	N-CA-C	-5.08	106.78	112.87
1	A	357	SER	N-CA-C	5.08	117.57	109.96
1	B	233	ASN	N-CA-C	5.07	118.03	110.52
1	A	-1	PHE	CA-C-N	5.07	127.67	120.53
1	A	-1	PHE	C-N-CA	5.07	127.67	120.53
1	D	206	VAL	N-CA-C	5.06	116.00	108.46
1	E	83	ASP	CA-C-N	-5.05	114.62	122.09
1	E	83	ASP	C-N-CA	-5.05	114.62	122.09
1	D	312	VAL	N-CA-C	5.04	119.83	109.34
1	A	248	ILE	N-CA-C	-5.02	104.82	111.09
1	A	43	ALA	CA-C-N	5.01	126.11	119.84
1	A	43	ALA	C-N-CA	5.01	126.11	119.84
1	B	93	VAL	N-CA-C	5.01	115.39	108.23

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	D	197	TRP	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3034	0	2948	156	0
1	B	3034	0	2948	136	0
1	D	3034	0	2950	203	0
1	E	3034	0	2948	164	0
2	A	48	0	46	10	0
2	B	48	0	46	8	0
2	D	48	0	46	5	0
2	E	48	0	46	10	0
3	A	24	0	0	7	0
3	B	38	0	0	2	0
3	D	20	0	0	2	0
3	E	24	0	0	3	0
All	All	12434	0	11978	670	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 28.

All (670) 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:A:73:GLN:HG2	3:A:414:HOH:O	1.43	1.18
1:D:376:THR:HA	3:D:412:HOH:O	1.53	1.07
1:E:63:LEU:HD12	1:E:80:LEU:HB3	1.34	1.07
2:E:394:PB8:H31A	2:E:394:PB8:H28A	1.30	1.07
2:E:394:PB8:H28A	2:E:394:PB8:C31	1.88	1.01
1:B:18:MET:HE3	1:B:87:ILE:HG12	1.47	0.96
1:A:250:ALA:O	1:A:253:SER:HB2	1.65	0.95
1:B:130:ASP:OD1	1:B:132:SER:HB2	1.67	0.94
1:B:153:GLN:HG2	1:B:183:LEU:HD22	1.47	0.94

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:128:ARG:HH11	1:D:128:ARG:HG2	1.34	0.92
1:D:238:LYS:O	1:D:242:GLU:CG	2.19	0.91
1:A:228:ASP:OD2	2:A:394:PB8:N39	2.03	0.91
1:B:359:CYS:HB3	3:B:420:HOH:O	1.71	0.89
1:D:128:ARG:HH11	1:D:128:ARG:CG	1.85	0.89
1:A:241:PHE:CD2	1:A:326:GLN:HG3	2.09	0.88
1:B:234:LEU:HD13	1:B:337:ILE:HD12	1.56	0.88
1:E:193:ILE:HG13	1:E:350:LYS:C	2.00	0.87
1:E:357:SER:C	1:E:359:CYS:H	1.80	0.86
1:D:238:LYS:O	1:D:242:GLU:HG3	1.76	0.86
1:A:194:ARG:HH12	1:A:384:TYR:H	1.24	0.85
1:D:70:PRO:HD2	1:D:128:ARG:NH2	1.91	0.85
1:D:304:GLN:O	1:D:336:VAL:HB	1.77	0.84
1:B:235:ARG:HB2	1:B:332:VAL:HB	1.59	0.84
1:E:232:THR:O	1:E:336:VAL:HG13	1.78	0.84
1:E:19:THR:OG1	1:E:86:SER:HB2	1.78	0.83
1:E:18:MET:HB2	1:E:29:ILE:CD1	2.08	0.83
2:B:394:PB8:C28	2:B:394:PB8:H24	2.09	0.82
1:E:18:MET:HB2	1:E:29:ILE:HD13	1.60	0.82
1:A:315:SER:OG	1:A:316:GLN:N	2.08	0.81
1:D:137:PHE:HE1	1:D:176:ILE:HG23	1.46	0.81
2:B:394:PB8:H24	2:B:394:PB8:H28B	1.63	0.80
1:E:311:ASP:OD2	1:E:315:SER:HB3	1.81	0.80
1:E:18:MET:SD	1:E:29:ILE:HD13	2.21	0.80
1:D:235:ARG:CZ	2:D:394:PB8:H8	2.12	0.79
1:D:45:HIS:CG	1:D:46:PRO:HD2	2.18	0.79
1:D:2:MET:SD	1:D:91:PRO:HD3	2.23	0.78
1:E:30:LEU:HD23	1:E:118:ILE:HD12	1.66	0.78
1:A:194:ARG:NH1	1:A:384:TYR:H	1.79	0.78
1:B:163:GLN:O	1:B:167:LEU:HD12	1.83	0.78
1:A:123:TYR:CE1	1:A:196:GLU:HG2	2.18	0.78
1:D:188:LEU:HD13	1:D:355:ALA:HB2	1.66	0.78
1:E:85:VAL:HG11	1:E:136:PHE:HE1	1.48	0.77
1:D:48:LEU:HD21	1:D:109:PHE:CD1	2.19	0.77
1:D:128:ARG:HG2	1:D:128:ARG:NH1	1.94	0.77
1:E:36:SER:OG	1:E:126:ILE:HG13	1.83	0.77
1:A:20:VAL:O	1:A:25:GLN:HG3	1.85	0.77
1:E:315:SER:OG	1:E:316:GLN:N	2.11	0.76
1:D:17:GLU:O	1:D:88:PRO:HD2	1.86	0.76
1:D:215:MET:HE1	1:D:239:LYS:O	1.85	0.76
1:D:238:LYS:O	1:D:242:GLU:HG2	1.84	0.75

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:194:ARG:HH12	1:A:384:TYR:N	1.82	0.75
1:D:10:SER:OG	1:D:307:ARG:HD3	1.86	0.75
1:D:195:ARG:O	1:D:197:TRP:HD1	1.69	0.75
1:E:63:LEU:HD21	1:E:82:THR:HG23	1.67	0.75
1:E:2:MET:HE3	1:E:90:GLY:HA2	1.68	0.75
1:D:28:ASN:C	1:D:29:ILE:HD13	2.12	0.74
1:D:202:ILE:HG21	1:D:382:CYS:SG	2.27	0.74
1:D:6:LEU:HD22	1:D:14:TYR:HB3	1.70	0.74
1:A:222:TYR:O	1:A:330:GLY:HA2	1.88	0.73
1:A:357:SER:C	1:A:359:CYS:H	1.95	0.73
1:E:2:MET:HE1	1:E:176:ILE:HG12	1.70	0.73
1:E:357:SER:OG	1:E:359:CYS:HB3	1.89	0.73
1:D:356:VAL:HG23	3:D:397:HOH:O	1.88	0.72
1:E:20:VAL:O	1:E:25:GLN:HG3	1.88	0.72
1:D:29:ILE:HG23	1:D:118:ILE:N	2.04	0.72
1:D:205:ARG:HA	1:D:220:TYR:HE2	1.55	0.72
1:D:85:VAL:HG11	1:D:136:PHE:CE1	2.24	0.72
1:E:234:LEU:HB2	1:E:337:ILE:HD13	1.71	0.72
1:B:298:ILE:HG22	1:B:370:VAL:HG22	1.72	0.71
1:A:123:TYR:CZ	1:A:196:GLU:HG2	2.25	0.71
1:E:346:ASP:HB3	1:E:351:ARG:HG3	1.73	0.71
2:E:394:PB8:H24	2:E:394:PB8:H28B	1.72	0.71
1:D:2:MET:CE	1:D:91:PRO:HD3	2.21	0.71
1:A:207:GLU:O	1:A:208:ILE:HD13	1.91	0.70
1:A:91:PRO:HD3	1:A:176:ILE:HD13	1.74	0.70
1:A:235:ARG:NH1	1:A:326:GLN:O	2.25	0.70
1:B:249:LYS:HG2	1:B:262:TRP:CZ2	2.26	0.69
1:E:63:LEU:HG	1:E:81:GLY:HA2	1.75	0.69
1:B:174:MET:HE3	1:B:176:ILE:HD11	1.74	0.69
1:D:194:ARG:HB3	1:D:200:GLU:OE1	1.92	0.69
1:B:322:PHE:CZ	1:B:324:ILE:HD12	2.27	0.69
1:A:235:ARG:NH2	1:A:327:SER:HB2	2.07	0.69
1:E:234:LEU:HB3	1:E:324:ILE:HG23	1.74	0.69
1:B:267:LEU:HD13	1:B:269:CYS:SG	2.33	0.68
1:E:197:TRP:HD1	1:E:197:TRP:H	1.40	0.68
1:E:189:TRP:O	1:E:353:GLY:HA2	1.93	0.68
1:B:149:LEU:HD12	1:B:346:ASP:HA	1.74	0.68
1:E:357:SER:C	1:E:359:CYS:N	2.48	0.68
1:D:188:LEU:CD1	1:D:355:ALA:HB2	2.23	0.68
1:A:2:MET:SD	1:A:90:GLY:HA2	2.34	0.68
1:D:70:PRO:HD2	1:D:128:ARG:HH21	1.56	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:51:TYR:HD2	1:D:51:TYR:N	1.91	0.67
2:E:394:PB8:H28A	2:E:394:PB8:H31	1.77	0.67
1:A:121:LEU:HD11	1:A:174:MET:HE1	1.76	0.67
2:E:394:PB8:H31A	2:E:394:PB8:C28	2.18	0.67
1:B:197:TRP:CG	1:B:198:TYR:H	2.12	0.67
1:D:173:SER:HB3	1:D:175:ILE:HD11	1.76	0.67
1:E:197:TRP:H	1:E:197:TRP:CD1	2.13	0.67
1:A:221:ASN:ND2	1:A:225:SER:HB2	2.10	0.66
1:E:151:SER:HB3	1:E:344:VAL:HG22	1.77	0.66
1:D:258:PRO:HG2	1:D:266:GLN:OE1	1.96	0.66
1:D:379:MET:O	1:D:381:ASP:N	2.29	0.66
1:B:18:MET:CE	1:B:87:ILE:HG12	2.25	0.66
1:A:22:SER:O	1:A:57:SER:HA	1.96	0.66
1:D:2:MET:HG2	1:D:90:GLY:HA2	1.78	0.66
1:E:263:LEU:HB3	1:E:265:GLU:HG3	1.77	0.66
1:B:50:ARG:O	1:B:116:GLU:HG2	1.96	0.66
1:E:205:ARG:HB3	1:E:286:TYR:HB2	1.78	0.65
1:A:197:TRP:CG	1:A:198:TYR:H	2.14	0.65
1:B:218:LYS:HE2	1:B:383:GLY:O	1.96	0.65
1:D:137:PHE:CE1	1:D:176:ILE:HG23	2.30	0.65
1:D:70:PRO:CD	1:D:128:ARG:NH2	2.59	0.65
1:D:207:GLU:O	1:D:208:ILE:HD13	1.96	0.65
1:E:188:LEU:HD23	1:E:355:ALA:HB2	1.79	0.65
1:A:218:LYS:HE2	1:A:381:ASP:O	1.96	0.65
1:E:140:LEU:HD12	1:E:140:LEU:O	1.96	0.65
1:D:22:SER:HB2	1:D:59:THR:HG22	1.77	0.65
1:E:302:PRO:O	1:E:306:LEU:HB2	1.96	0.65
1:B:233:ASN:HD22	1:B:325:SER:HB3	1.62	0.64
1:B:234:LEU:O	1:B:324:ILE:HA	1.97	0.64
1:A:376:THR:HG22	1:B:365:PHE:HZ	1.63	0.64
1:E:141:VAL:HG13	1:E:146:VAL:O	1.97	0.64
1:D:207:GLU:C	1:D:208:ILE:HD13	2.23	0.64
1:E:232:THR:HB	3:E:402:HOH:O	1.97	0.64
1:A:47:PHE:CE1	1:A:111:ASN:HB2	2.33	0.64
1:D:26:THR:O	1:D:27:LEU:HD23	1.98	0.64
1:A:279:ILE:HA	1:B:211:GLN:HG3	1.79	0.63
1:E:21:GLY:O	1:E:24:PRO:HA	1.99	0.63
1:A:67:VAL:HG11	1:A:80:LEU:CD2	2.27	0.63
1:B:234:LEU:HD13	1:B:337:ILE:CD1	2.26	0.63
1:D:296:PHE:N	1:D:296:PHE:CD2	2.66	0.63
1:E:32:ASP:OD1	1:E:34:GLY:N	2.30	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:33:THR:OG1	1:D:228:ASP:HA	1.98	0.63
1:A:208:ILE:HG21	1:A:247:SER:HB3	1.80	0.62
1:D:260:GLY:HA2	1:D:263:LEU:HB2	1.81	0.62
1:A:304:GLN:O	1:A:336:VAL:HB	1.98	0.62
1:B:31:VAL:HG11	1:B:152:LEU:HD21	1.81	0.62
1:E:33:THR:N	1:E:229:SER:OG	2.30	0.62
1:B:140:LEU:O	1:B:144:THR:OG1	2.17	0.62
1:A:239:LYS:CB	1:A:239:LYS:NZ	2.63	0.62
1:D:156:GLY:H	1:D:339:GLU:HG2	1.63	0.62
1:B:163:GLN:O	1:B:167:LEU:CD1	2.48	0.62
1:A:67:VAL:HG11	1:A:80:LEU:HD21	1.82	0.62
1:D:197:TRP:CG	1:D:198:TYR:H	2.18	0.62
1:D:51:TYR:N	1:D:51:TYR:CD2	2.67	0.61
1:D:38:PHE:CE2	1:D:99:ILE:HG13	2.36	0.61
1:A:52:TYR:CE2	1:A:54:ARG:HG2	2.35	0.61
1:B:357:SER:C	1:B:359:CYS:H	2.09	0.61
1:D:205:ARG:HA	1:D:220:TYR:CE2	2.34	0.60
1:D:315:SER:OG	1:D:316:GLN:N	2.32	0.60
1:D:194:ARG:NH2	1:D:384:TYR:O	2.30	0.60
1:A:260:GLY:C	1:A:266:GLN:HG2	2.26	0.60
1:D:85:VAL:HG11	1:D:136:PHE:HE1	1.67	0.60
1:A:54:ARG:O	1:A:56:LEU:N	2.34	0.60
1:A:149:LEU:O	1:A:177:GLY:HA2	2.02	0.60
1:B:376:THR:OG1	1:B:379:MET:HE2	2.02	0.60
1:D:22:SER:HB2	1:D:59:THR:CG2	2.31	0.60
1:A:205:ARG:NE	1:A:207:GLU:OE2	2.29	0.60
1:B:346:ASP:HB3	1:B:351:ARG:HG2	1.84	0.60
1:A:47:PHE:CD1	1:A:111:ASN:HB2	2.37	0.59
1:A:318:ASP:OD2	3:A:418:HOH:O	2.16	0.59
1:D:302:PRO:HA	1:D:305:TYR:CE2	2.36	0.59
2:A:394:PB8:H30	2:A:394:PB8:H10	1.85	0.59
1:D:125:GLU:HG2	1:D:197:TRP:HB3	1.84	0.58
1:B:41:GLY:HA2	1:B:102:ILE:HB	1.85	0.58
1:B:206:VAL:HG22	1:B:285:LEU:HD23	1.86	0.58
1:E:212:ASP:OD1	1:E:214:LYS:N	2.26	0.58
1:B:4:ASP:H	1:B:173:SER:HG	1.51	0.58
1:B:206:VAL:HG22	1:B:285:LEU:CD2	2.33	0.58
1:B:32:ASP:OD1	1:B:34:GLY:N	2.34	0.58
1:B:110:ILE:CD1	2:B:394:PB8:H30A	2.33	0.58
1:D:19:THR:OG1	1:D:86:SER:HB3	2.03	0.58
1:D:38:PHE:CE2	1:D:99:ILE:CG1	2.87	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:363:ASP:HB2	1:A:364:GLU:OE2	2.02	0.58
1:D:311:ASP:O	1:D:314:THR:N	2.36	0.58
1:A:364:GLU:CD	1:A:364:GLU:H	2.11	0.58
1:E:193:ILE:HG13	1:E:350:LYS:O	2.04	0.57
1:A:38:PHE:CD1	1:A:119:LEU:HD12	2.40	0.57
1:A:148:ASN:O	1:A:347:ARG:HB2	2.04	0.57
1:B:205:ARG:HB3	1:B:286:TYR:CG	2.39	0.57
1:D:110:ILE:O	1:D:113:SER:HB3	2.04	0.57
1:B:110:ILE:HD11	2:B:394:PB8:H30A	1.86	0.57
1:D:10:SER:HG	1:D:307:ARG:HD3	1.69	0.57
1:E:2:MET:HE1	1:E:176:ILE:CG1	2.34	0.57
1:A:193:ILE:HG22	1:A:195:ARG:H	1.68	0.57
1:B:29:ILE:HD12	1:B:117:GLY:HA3	1.85	0.57
1:B:45:HIS:CG	1:B:46:PRO:HD2	2.40	0.57
1:D:45:HIS:ND1	1:D:46:PRO:HD2	2.18	0.57
1:D:195:ARG:O	1:D:197:TRP:CD1	2.55	0.57
1:D:197:TRP:CD1	1:D:197:TRP:N	2.72	0.57
1:D:204:VAL:HG11	1:D:379:MET:HG2	1.87	0.57
1:E:153:GLN:OE1	1:E:183:LEU:HD22	2.04	0.57
1:B:3:VAL:O	1:B:4:ASP:HB2	2.05	0.57
1:D:140:LEU:HD21	1:D:176:ILE:HG21	1.86	0.57
1:D:188:LEU:HD13	1:D:355:ALA:CB	2.34	0.57
1:B:197:TRP:CG	1:B:198:TYR:N	2.69	0.57
1:A:236:LEU:HD23	1:A:331:THR:HG23	1.86	0.56
1:E:28:ASN:HB2	1:E:116:GLU:OE2	2.04	0.56
1:B:235:ARG:NH1	2:B:394:PB8:H4	2.20	0.56
1:E:195:ARG:HG2	1:E:197:TRP:CD1	2.40	0.56
1:E:85:VAL:HG11	1:E:136:PHE:CE1	2.35	0.56
1:E:20:VAL:HB	1:E:85:VAL:HG23	1.88	0.56
1:E:37:ASN:HB2	3:E:400:HOH:O	2.05	0.56
1:E:40:VAL:C	1:E:102:ILE:HD12	2.30	0.56
1:E:32:ASP:C	1:E:34:GLY:H	2.12	0.56
1:A:137:PHE:CZ	1:A:150:PHE:HB3	2.40	0.56
1:A:349:ARG:NH1	3:A:417:HOH:O	2.16	0.56
1:B:45:HIS:HE1	1:B:47:PHE:CD2	2.24	0.56
1:E:45:HIS:HB3	1:E:48:LEU:HD22	1.88	0.56
1:E:346:ASP:CB	1:E:351:ARG:HE	2.18	0.56
1:B:282:VAL:HG13	1:B:366:ARG:NH1	2.21	0.56
1:D:241:PHE:HE1	1:D:324:ILE:HG22	1.70	0.56
1:A:149:LEU:C	1:A:149:LEU:HD12	2.31	0.55
1:A:137:PHE:O	1:A:141:VAL:HG23	2.06	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:54:ARG:C	1:A:56:LEU:N	2.64	0.55
1:E:16:VAL:HG21	1:E:174:MET:CE	2.36	0.55
1:E:174:MET:HE3	1:E:176:ILE:HD11	1.88	0.55
1:A:54:ARG:C	1:A:56:LEU:H	2.15	0.55
1:A:363:ASP:OD1	1:A:363:ASP:C	2.50	0.55
1:E:253:SER:O	1:E:255:GLU:N	2.40	0.55
1:A:191:THR:OG1	1:A:288:MET:O	2.24	0.55
1:E:19:THR:HB	1:E:24:PRO:HB2	1.88	0.55
1:B:218:LYS:HA	1:B:382:CYS:O	2.07	0.55
1:E:367:THR:HG23	1:E:368:ALA:O	2.06	0.55
1:D:218:LYS:HE3	1:D:381:ASP:O	2.06	0.55
1:A:349:ARG:O	1:A:350:LYS:C	2.47	0.54
1:E:286:TYR:CE1	1:E:297:ARG:HD3	2.43	0.54
1:A:234:LEU:HB2	1:A:337:ILE:HD11	1.90	0.54
1:D:217:CYS:SG	1:D:382:CYS:HB3	2.47	0.54
1:E:130:ASP:OD1	1:E:132:SER:HB3	2.07	0.54
2:E:394:PB8:H24	2:E:394:PB8:C28	2.37	0.54
1:B:356:VAL:HG23	1:B:370:VAL:HG23	1.89	0.54
1:D:225:SER:HA	1:D:331:THR:O	2.08	0.54
1:A:194:ARG:NH1	1:A:384:TYR:N	2.48	0.54
1:B:130:ASP:OD1	1:B:130:ASP:C	2.51	0.54
1:D:5:ASN:OD1	1:D:173:SER:HA	2.06	0.54
1:D:76:TRP:HB2	1:D:102:ILE:HG23	1.90	0.54
1:E:280:PHE:HB3	1:E:302:PRO:HB3	1.90	0.54
1:A:9:LYS:O	1:A:10:SER:C	2.51	0.54
1:E:124:ALA:O	1:E:125:GLU:C	2.50	0.54
1:B:335:ALA:O	1:B:339:GLU:HG3	2.08	0.54
1:E:253:SER:C	1:E:255:GLU:N	2.65	0.54
1:A:189:TRP:HA	3:A:411:HOH:O	2.08	0.53
1:D:286:TYR:OH	1:D:297:ARG:NH1	2.41	0.53
1:B:153:GLN:CG	1:B:183:LEU:HD22	2.30	0.53
1:A:130:ASP:OD2	1:A:132:SER:N	2.36	0.53
1:D:32:ASP:HA	1:D:229:SER:OG	2.08	0.53
1:E:136:PHE:C	1:E:136:PHE:CD2	2.85	0.53
1:A:200:GLU:HA	1:A:225:SER:O	2.08	0.53
1:B:194:ARG:HD2	1:B:202:ILE:HD11	1.90	0.53
1:B:232:THR:HG22	1:B:233:ASN:OD1	2.08	0.53
1:B:34:GLY:O	2:B:394:PB8:N39	2.39	0.53
1:B:124:ALA:O	1:B:125:GLU:C	2.50	0.53
1:E:357:SER:O	1:E:359:CYS:N	2.41	0.53
1:B:357:SER:OG	1:B:359:CYS:HB2	2.09	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:15:TYR:CD1	1:A:28:ASN:HB3	2.44	0.53
1:A:221:ASN:ND2	1:A:225:SER:CB	2.72	0.53
1:D:28:ASN:HB2	1:D:115:TRP:HA	1.92	0.53
1:D:226:ILE:HD11	2:D:394:PB8:H23	1.91	0.53
1:E:26:THR:HG22	1:E:50:ARG:NH1	2.24	0.53
1:D:298:ILE:HD12	1:D:341:PHE:CE2	2.44	0.52
1:A:346:ASP:OD2	1:A:349:ARG:HD3	2.09	0.52
1:D:121:LEU:HD13	1:D:150:PHE:CE1	2.44	0.52
1:E:188:LEU:CD2	1:E:355:ALA:HB2	2.38	0.52
1:A:149:LEU:O	1:A:177:GLY:CA	2.57	0.52
1:B:277:TRP:HE3	1:B:302:PRO:HG2	1.74	0.52
1:D:20:VAL:HG12	1:D:52:TYR:CE1	2.44	0.52
1:D:334:GLY:O	1:D:337:ILE:HB	2.10	0.52
1:E:95:VAL:HG21	1:E:140:LEU:HD13	1.90	0.52
1:A:267:LEU:HD12	1:A:267:LEU:O	2.08	0.52
1:B:54:ARG:HD2	1:B:60:TYR:CZ	2.45	0.52
1:D:124:ALA:O	1:D:126:ILE:N	2.43	0.52
1:E:235:ARG:HB2	1:E:332:VAL:HB	1.92	0.52
1:D:110:ILE:HD12	1:D:115:TRP:CZ2	2.45	0.52
1:D:18:MET:HE1	1:D:119:LEU:HD13	1.91	0.52
1:D:20:VAL:CG1	1:D:52:TYR:CE1	2.92	0.52
1:D:245:VAL:O	1:D:249:LYS:HB2	2.10	0.52
1:D:298:ILE:HG22	1:D:370:VAL:HG22	1.90	0.52
1:B:301:LEU:HD21	1:B:367:THR:C	2.34	0.52
1:D:2:MET:HE1	1:D:176:ILE:HG13	1.91	0.52
1:D:140:LEU:O	1:D:144:THR:HG22	2.10	0.52
1:D:274:THR:O	1:D:275:THR:C	2.49	0.52
1:A:235:ARG:HB2	1:A:332:VAL:HB	1.92	0.52
1:D:122:ALA:CB	1:D:126:ILE:HD11	2.40	0.52
1:E:197:TRP:CD1	1:E:197:TRP:N	2.76	0.52
1:A:309:VAL:HG21	1:A:321:LYS:HD2	1.92	0.52
1:D:32:ASP:OD1	1:D:34:GLY:N	2.40	0.52
1:D:2:MET:CE	1:D:176:ILE:H	2.23	0.51
1:B:280:PHE:HB2	1:B:302:PRO:HG3	1.92	0.51
1:D:37:ASN:HD21	1:D:128:ARG:H	1.58	0.51
1:E:188:LEU:HD23	1:E:354:PHE:C	2.35	0.51
1:A:14:TYR:CG	1:A:154:LEU:HD22	2.45	0.51
1:A:327:SER:OG	1:A:330:GLY:O	2.16	0.51
1:A:77:GLU:HB3	1:A:104:GLU:HB2	1.92	0.51
1:D:381:ASP:OD1	1:D:381:ASP:C	2.53	0.51
1:B:18:MET:HG3	1:B:29:ILE:HG12	1.93	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:-1:PHE:HB3	1:E:2:MET:HG3	1.93	0.51
1:E:19:THR:CG2	1:E:24:PRO:HB2	2.41	0.51
1:E:110:ILE:CD1	2:E:394:PB8:H30	2.41	0.51
1:A:121:LEU:CD1	1:A:174:MET:HE1	2.41	0.51
1:A:364:GLU:O	1:B:374:PHE:HE1	1.93	0.51
1:E:123:TYR:O	1:E:124:ALA:C	2.53	0.51
1:B:224:LYS:HE2	3:B:419:HOH:O	2.10	0.51
1:D:234:LEU:O	1:D:324:ILE:HA	2.12	0.51
1:A:245:VAL:O	1:A:249:LYS:HB2	2.11	0.50
1:D:4:ASP:N	1:D:173:SER:OG	2.22	0.50
1:D:22:SER:O	1:D:57:SER:HA	2.10	0.50
1:B:228:ASP:OD1	1:B:230:GLY:N	2.36	0.50
1:D:305:TYR:CD1	1:D:324:ILE:HD12	2.46	0.50
1:E:282:VAL:HG13	1:E:366:ARG:HH11	1.75	0.50
1:B:69:VAL:HG22	1:B:128:ARG:HB2	1.93	0.50
1:B:126:ILE:HD13	1:B:198:TYR:CE1	2.46	0.50
1:B:302:PRO:C	1:B:304:GLN:H	2.17	0.50
1:A:83:ASP:OD1	1:A:84:LEU:N	2.43	0.50
1:B:68:TYR:CZ	1:B:70:PRO:HG3	2.45	0.50
1:D:38:PHE:HE2	1:D:99:ILE:CG1	2.23	0.50
1:E:163:GLN:HG2	1:E:167:LEU:HD11	1.93	0.50
1:E:55:GLN:OE1	1:E:55:GLN:N	2.30	0.50
1:E:99:ILE:HG22	1:E:100:ALA:C	2.37	0.50
1:A:45:HIS:HB3	1:A:48:LEU:HD12	1.91	0.50
1:A:315:SER:HG	1:A:316:GLN:N	2.09	0.50
1:D:34:GLY:HA3	2:D:394:PB8:HN39	1.76	0.50
1:A:130:ASP:CG	1:A:132:SER:H	2.18	0.50
1:B:26:THR:O	1:B:27:LEU:HG	2.12	0.50
1:A:28:ASN:HB2	1:A:115:TRP:HA	1.94	0.50
1:D:219:GLU:OE1	1:D:239:LYS:HE2	2.12	0.50
1:E:16:VAL:HG21	1:E:174:MET:HE2	1.92	0.50
1:A:4:ASP:CG	1:A:170:VAL:HG21	2.37	0.49
1:E:63:LEU:HG	1:E:81:GLY:CA	2.40	0.49
1:A:197:TRP:CG	1:A:198:TYR:N	2.76	0.49
1:B:380:GLU:N	1:B:380:GLU:OE1	2.45	0.49
1:D:6:LEU:HB2	1:D:172:GLY:C	2.38	0.49
1:D:36:SER:OG	1:D:122:ALA:HB3	2.11	0.49
1:A:121:LEU:CD1	1:A:174:MET:CE	2.90	0.49
1:D:376:THR:OG1	1:D:379:MET:HE2	2.12	0.49
1:E:31:VAL:HG22	1:E:119:LEU:HD23	1.95	0.49
1:A:157:ALA:O	1:A:159:PHE:CE2	2.65	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:357:SER:OG	1:A:359:CYS:HB3	2.12	0.49
1:B:45:HIS:CE1	1:B:47:PHE:H	2.30	0.49
1:A:162:ASN:HD22	1:A:165:GLU:H	1.61	0.49
1:D:1:GLU:HG3	1:D:2:MET:HG3	1.95	0.49
1:D:261:PHE:HZ	1:D:306:LEU:CD2	2.26	0.49
1:D:281:PRO:HD2	1:D:305:TYR:OH	2.13	0.49
1:A:10:SER:OG	1:A:307:ARG:CD	2.60	0.49
1:D:38:PHE:CD2	1:D:99:ILE:HG13	2.48	0.49
1:D:40:VAL:HG12	1:D:117:GLY:HA3	1.95	0.49
1:E:297:ARG:HB2	1:E:374:PHE:CE2	2.47	0.49
1:D:4:ASP:H	1:D:173:SER:HG	1.56	0.49
1:D:20:VAL:N	1:D:25:GLN:O	2.42	0.49
1:D:147:PRO:HB2	1:D:149:LEU:HD23	1.95	0.49
1:E:47:PHE:HB3	1:E:111:ASN:HA	1.95	0.49
1:E:336:VAL:HG23	1:E:337:ILE:HD12	1.95	0.49
1:A:54:ARG:O	1:A:55:GLN:C	2.56	0.48
1:B:360:HIS:CD2	1:B:368:ALA:HB3	2.48	0.48
1:E:91:PRO:HB2	1:E:93:VAL:HG22	1.94	0.48
1:E:261:PHE:C	1:E:261:PHE:CD2	2.91	0.48
1:B:23:PRO:CB	1:B:24:PRO:HD2	2.43	0.48
1:E:277:TRP:HE3	1:E:302:PRO:HG2	1.76	0.48
1:A:239:LYS:CB	1:A:239:LYS:HZ2	2.26	0.48
1:B:237:PRO:HD2	1:B:240:VAL:HB	1.94	0.48
1:E:153:GLN:HE21	1:E:359:CYS:HB2	1.79	0.48
1:E:205:ARG:HA	1:E:220:TYR:CE2	2.49	0.48
1:D:197:TRP:CD1	1:D:197:TRP:H	2.32	0.48
1:D:199:TYR:OH	1:D:347:ARG:NH1	2.35	0.48
1:B:239:LYS:NZ	1:B:239:LYS:CB	2.76	0.48
1:D:234:LEU:HD13	1:D:337:ILE:HG13	1.95	0.48
1:A:32:ASP:OD2	2:A:394:PB8:H32A	2.13	0.48
1:D:253:SER:O	1:D:255:GLU:N	2.46	0.48
1:E:218:LYS:HE3	1:E:381:ASP:O	2.14	0.48
1:A:239:LYS:NZ	1:A:239:LYS:HB3	2.28	0.48
1:B:215:MET:HE1	1:B:239:LYS:C	2.39	0.48
1:E:2:MET:HE2	1:E:2:MET:HB3	1.59	0.48
1:E:203:ILE:HG23	1:E:286:TYR:O	2.14	0.48
1:D:2:MET:HE1	1:D:176:ILE:HB	1.96	0.48
1:B:3:VAL:HG12	1:B:4:ASP:N	2.29	0.47
1:E:29:ILE:HG23	1:E:118:ILE:N	2.29	0.47
1:A:133:LEU:HD23	3:A:401:HOH:O	2.13	0.47
1:A:283:ILE:HD12	1:A:300:ILE:HD11	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:28:ASN:O	1:D:29:ILE:HD13	2.14	0.47
1:A:261:PHE:N	1:A:266:GLN:HG2	2.29	0.47
1:B:39:ALA:O	1:B:118:ILE:N	2.46	0.47
1:E:74:GLY:HA2	1:E:106:ASP:O	2.13	0.47
1:B:205:ARG:HB3	1:B:286:TYR:CD2	2.49	0.47
1:D:38:PHE:CE2	1:D:99:ILE:HG12	2.48	0.47
1:A:300:ILE:HD12	1:A:305:TYR:HD2	1.80	0.47
2:D:394:PB8:HN41	2:D:394:PB8:H30	1.79	0.47
1:E:334:GLY:O	1:E:338:MET:HG3	2.13	0.47
1:A:357:SER:C	1:A:359:CYS:N	2.62	0.47
1:D:302:PRO:HA	1:D:305:TYR:CD2	2.49	0.47
1:E:297:ARG:O	1:E:370:VAL:HA	2.14	0.47
1:A:10:SER:OG	1:A:307:ARG:HD2	2.15	0.47
1:A:41:GLY:O	1:A:51:TYR:HB2	2.15	0.47
1:E:95:VAL:HG21	1:E:140:LEU:CD1	2.44	0.47
1:E:188:LEU:HA	1:E:354:PHE:O	2.14	0.47
1:E:194:ARG:HB3	1:E:200:GLU:CG	2.45	0.47
1:E:195:ARG:NH2	1:E:197:TRP:CD2	2.83	0.47
1:A:32:ASP:OD2	1:A:118:ILE:HD11	2.15	0.47
1:E:140:LEU:HD12	1:E:140:LEU:C	2.40	0.47
1:A:230:GLY:O	2:A:394:PB8:H32	2.15	0.47
1:B:54:ARG:HD2	1:B:60:TYR:OH	2.15	0.47
1:B:237:PRO:HA	1:B:327:SER:O	2.15	0.47
1:B:297:ARG:NH2	1:B:371:GLU:OE1	2.39	0.47
1:D:85:VAL:HG11	1:D:136:PHE:CZ	2.50	0.47
1:D:183:LEU:HB2	1:D:342:TYR:CE2	2.50	0.47
1:D:261:PHE:CD1	1:D:268:VAL:HG23	2.50	0.47
1:E:20:VAL:HG23	1:E:84:LEU:O	2.15	0.47
1:E:26:THR:HG22	1:E:50:ARG:HH12	1.79	0.47
1:E:280:PHE:HB2	1:E:302:PRO:HG3	1.96	0.47
1:B:322:PHE:CE2	1:B:324:ILE:HB	2.50	0.47
1:D:202:ILE:HA	1:D:221:ASN:OD1	2.15	0.47
1:D:61:ARG:N	1:D:82:THR:O	2.48	0.46
1:E:295:SER:HB3	1:E:379:MET:HE1	1.96	0.46
1:B:30:LEU:HG	1:B:31:VAL:N	2.28	0.46
1:D:137:PHE:CD2	1:D:347:ARG:NE	2.83	0.46
1:E:32:ASP:C	1:E:34:GLY:N	2.69	0.46
1:A:364:GLU:O	1:B:374:PHE:CE1	2.69	0.46
1:D:234:LEU:HD22	1:D:337:ILE:HD11	1.97	0.46
1:D:241:PHE:CE1	1:D:324:ILE:HG22	2.49	0.46
1:A:251:ALA:C	1:A:253:SER:H	2.21	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:267:LEU:HD12	1:A:267:LEU:C	2.41	0.46
1:B:190:TYR:CD1	1:B:351:ARG:HG3	2.51	0.46
1:A:251:ALA:HB3	1:A:281:PRO:HG3	1.97	0.46
1:D:83:ASP:OD1	1:D:84:LEU:N	2.49	0.46
1:D:194:ARG:HD3	1:D:200:GLU:OE1	2.16	0.46
1:A:234:LEU:O	1:A:324:ILE:HA	2.15	0.46
1:B:180:ASP:HB3	1:B:183:LEU:HD12	1.97	0.46
1:D:54:ARG:O	1:D:56:LEU:N	2.49	0.46
1:D:197:TRP:HD1	1:D:197:TRP:H	1.63	0.46
1:D:240:VAL:O	1:D:241:PHE:C	2.58	0.46
1:D:314:THR:HG22	1:D:314:THR:O	2.16	0.46
1:E:297:ARG:HB2	1:E:374:PHE:HE2	1.81	0.46
1:E:14:TYR:CD2	1:E:154:LEU:HG	2.51	0.46
1:E:26:THR:CG2	1:E:27:LEU:N	2.77	0.46
1:E:42:ALA:HB3	1:E:102:ILE:O	2.15	0.46
1:A:98:ASN:ND2	3:A:399:HOH:O	2.19	0.46
1:A:149:LEU:O	1:A:177:GLY:N	2.48	0.46
1:A:291:VAL:O	1:A:292:THR:C	2.59	0.46
1:D:199:TYR:HB3	1:D:352:ILE:HD11	1.98	0.46
1:D:327:SER:OG	1:D:330:GLY:O	2.24	0.46
1:D:61:ARG:O	1:D:81:GLY:HA2	2.16	0.46
1:E:126:ILE:HG23	1:E:197:TRP:HB2	1.98	0.46
1:B:130:ASP:C	1:B:132:SER:H	2.25	0.45
1:A:311:ASP:OD1	1:A:312:VAL:N	2.49	0.45
1:A:341:PHE:HB3	1:A:355:ALA:O	2.16	0.45
1:B:148:ASN:HB3	1:B:348:ALA:HB2	1.97	0.45
1:B:204:VAL:HG11	1:B:379:MET:HG2	1.97	0.45
1:D:300:ILE:O	1:D:300:ILE:HG13	2.15	0.45
1:D:301:LEU:HA	1:D:302:PRO:HD2	1.68	0.45
1:E:246:LYS:HA	1:E:246:LYS:HE2	1.98	0.45
1:A:10:SER:OG	1:A:11:GLY:N	2.50	0.45
1:E:114:ASN:ND2	1:E:167:LEU:HD21	2.31	0.45
1:A:288:MET:HG3	1:A:289:GLY:N	2.31	0.45
1:B:2:MET:CG	1:B:90:GLY:HA2	2.46	0.45
1:B:91:PRO:O	1:B:93:VAL:N	2.49	0.45
1:B:236:LEU:HD22	1:B:240:VAL:CG1	2.47	0.45
1:D:174:MET:O	1:D:174:MET:HG2	2.16	0.45
1:E:162:ASN:O	1:E:163:GLN:C	2.60	0.45
1:A:14:TYR:OH	1:A:339:GLU:OE2	2.33	0.45
1:B:68:TYR:OH	1:B:70:PRO:HG3	2.17	0.45
1:B:208:ILE:O	1:B:209:ASN:C	2.59	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:357:SER:OG	1:A:359:CYS:CB	2.65	0.45
1:B:302:PRO:C	1:B:304:GLN:N	2.74	0.45
1:E:197:TRP:CG	1:E:198:TYR:H	2.33	0.45
1:E:231:THR:HG21	1:E:332:VAL:HG11	1.98	0.45
1:A:343:VAL:HG12	1:A:345:PHE:CE2	2.52	0.45
1:A:375:VAL:O	1:A:375:VAL:HG12	2.16	0.45
1:D:235:ARG:HB2	1:D:332:VAL:HB	1.98	0.45
1:E:297:ARG:NH2	1:E:371:GLU:OE1	2.49	0.45
1:A:344:VAL:HB	1:A:353:GLY:HA3	1.99	0.45
1:D:213:LEU:HD11	1:D:244:ALA:HA	1.99	0.45
1:E:194:ARG:HB3	1:E:200:GLU:HG2	1.99	0.45
1:E:21:GLY:HA2	1:E:57:SER:OG	2.16	0.45
1:E:61:ARG:HD2	1:E:96:ARG:CZ	2.46	0.45
1:E:280:PHE:CB	1:E:302:PRO:HB3	2.46	0.45
1:B:205:ARG:NH2	1:B:212:ASP:HB2	2.31	0.45
1:D:45:HIS:CE1	1:D:46:PRO:HD2	2.52	0.45
1:A:222:TYR:O	1:A:330:GLY:CA	2.61	0.44
2:A:394:PB8:C28	2:A:394:PB8:H9	2.47	0.44
1:B:222:TYR:O	1:B:223:ASP:CB	2.64	0.44
1:D:174:MET:C	1:D:175:ILE:HD13	2.42	0.44
1:A:357:SER:O	1:A:359:CYS:N	2.48	0.44
2:A:394:PB8:H24A	2:A:394:PB8:H37	1.64	0.44
1:B:215:MET:HE1	1:B:239:LYS:O	2.18	0.44
1:D:3:VAL:O	1:D:4:ASP:HB2	2.17	0.44
1:A:121:LEU:HD23	1:A:121:LEU:HA	1.72	0.44
1:D:45:HIS:CD2	1:D:46:PRO:HD2	2.52	0.44
1:D:191:THR:HA	1:D:192:PRO:HD3	1.83	0.44
1:E:203:ILE:HD13	1:E:285:LEU:HD13	1.99	0.44
1:A:242:GLU:O	1:A:245:VAL:HG12	2.17	0.44
1:B:180:ASP:HB3	1:B:183:LEU:CD1	2.47	0.44
1:D:51:TYR:HD2	1:D:51:TYR:H	1.65	0.44
1:E:61:ARG:HD2	1:E:96:ARG:NH1	2.32	0.44
1:E:218:LYS:HG3	1:E:382:CYS:O	2.18	0.44
1:E:323:ALA:HB1	1:E:336:VAL:HG11	2.00	0.44
1:D:2:MET:CE	1:D:91:PRO:CD	2.92	0.44
1:E:301:LEU:CB	1:E:302:PRO:HD2	2.47	0.44
1:A:301:LEU:C	1:A:303:GLN:N	2.76	0.44
1:B:40:VAL:HG12	1:B:117:GLY:HA3	1.98	0.44
1:B:322:PHE:CE1	1:B:324:ILE:HD12	2.52	0.44
1:D:84:LEU:HD23	1:D:96:ARG:HB2	1.99	0.44
1:D:128:ARG:HH11	1:D:128:ARG:HG3	1.77	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:357:SER:C	1:B:359:CYS:N	2.75	0.44
1:D:112:GLY:O	1:D:163:GLN:OE1	2.36	0.44
1:D:148:ASN:HB3	1:D:348:ALA:HB2	2.00	0.44
1:E:234:LEU:O	1:E:324:ILE:HA	2.18	0.44
1:B:23:PRO:HB2	1:B:24:PRO:HD2	2.00	0.44
1:B:119:LEU:HD11	1:B:136:PHE:HB3	2.00	0.44
1:B:153:GLN:NE2	1:B:155:CYS:SG	2.90	0.44
1:D:311:ASP:OD1	1:D:311:ASP:C	2.59	0.44
1:D:2:MET:HE1	1:D:176:ILE:H	1.82	0.44
1:D:45:HIS:ND1	1:D:46:PRO:CD	2.79	0.44
1:D:125:GLU:HG2	1:D:197:TRP:CB	2.47	0.44
1:D:311:ASP:CG	1:D:312:VAL:N	2.76	0.44
1:A:276:PRO:O	1:A:277:TRP:C	2.61	0.43
1:B:69:VAL:HG22	1:B:128:ARG:HG3	2.00	0.43
1:B:124:ALA:O	1:B:126:ILE:N	2.51	0.43
1:E:9:LYS:O	1:E:10:SER:C	2.59	0.43
1:E:26:THR:CG2	1:E:50:ARG:HH12	2.30	0.43
1:E:179:ILE:HD13	1:E:344:VAL:HG21	1.98	0.43
1:D:38:PHE:CD1	1:D:119:LEU:HD12	2.53	0.43
1:D:80:LEU:HA	1:D:80:LEU:HD23	1.43	0.43
1:D:188:LEU:HD12	1:D:188:LEU:HA	1.79	0.43
1:D:197:TRP:CD2	1:D:198:TYR:HD2	2.37	0.43
1:D:261:PHE:HZ	1:D:306:LEU:HD21	1.82	0.43
1:B:133:LEU:O	1:B:135:PRO:HD3	2.19	0.43
1:B:149:LEU:HD21	1:B:179:ILE:HG13	2.00	0.43
1:D:197:TRP:HD1	1:D:197:TRP:N	2.14	0.43
1:D:242:GLU:HG2	1:D:242:GLU:H	1.41	0.43
1:D:266:GLN:HG3	1:D:267:LEU:O	2.19	0.43
1:E:45:HIS:HE1	1:E:47:PHE:CD2	2.36	0.43
1:E:83:ASP:OD1	1:E:84:LEU:N	2.48	0.43
1:E:244:ALA:O	1:E:248:ILE:HG13	2.18	0.43
1:E:376:THR:OG1	1:E:379:MET:HE2	2.18	0.43
1:E:85:VAL:N	1:E:95:VAL:O	2.49	0.43
1:A:3:VAL:O	1:A:4:ASP:HB2	2.17	0.43
1:A:87:ILE:O	1:A:88:PRO:C	2.59	0.43
1:A:209:ASN:OD1	1:A:281:PRO:HA	2.18	0.43
1:B:282:VAL:HG13	1:B:366:ARG:HH11	1.84	0.43
1:E:137:PHE:HE1	1:E:176:ILE:HG23	1.83	0.43
1:B:126:ILE:HD13	1:B:198:TYR:CD1	2.54	0.43
1:D:197:TRP:CG	1:D:198:TYR:N	2.85	0.43
1:A:45:HIS:CB	1:A:48:LEU:HD12	2.49	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:73:GLN:HE21	2:A:394:PB8:H5	1.82	0.43
1:A:162:ASN:O	1:A:165:GLU:N	2.51	0.43
1:B:18:MET:HB3	1:B:18:MET:HE2	1.57	0.43
1:B:32:ASP:OD1	1:B:32:ASP:C	2.61	0.43
1:A:20:VAL:CG2	1:A:52:TYR:CE1	3.02	0.43
1:D:15:TYR:CD1	1:D:15:TYR:C	2.97	0.43
1:D:244:ALA:O	1:D:248:ILE:HG13	2.19	0.43
1:D:349:ARG:O	1:D:350:LYS:C	2.61	0.43
1:D:377:LEU:O	1:D:378:ASP:C	2.62	0.43
1:E:27:LEU:HD22	1:E:116:GLU:OE1	2.18	0.43
1:D:18:MET:CE	1:D:119:LEU:HD13	2.48	0.43
1:D:91:PRO:O	1:D:93:VAL:N	2.48	0.43
1:A:277:TRP:HE3	1:A:302:PRO:HB2	1.83	0.43
1:B:162:ASN:O	1:B:165:GLU:N	2.51	0.43
1:B:259:ASP:HA	1:B:262:TRP:HD1	1.84	0.43
1:D:85:VAL:HB	1:D:95:VAL:HG13	2.00	0.43
1:D:267:LEU:CD2	1:D:321:LYS:HG3	2.48	0.43
1:E:162:ASN:OD1	1:E:164:SER:HB3	2.19	0.43
1:E:301:LEU:HB3	1:E:302:PRO:HD2	2.01	0.43
1:B:22:SER:HA	1:B:23:PRO:HA	1.86	0.42
1:B:190:TYR:HA	1:B:352:ILE:O	2.19	0.42
1:D:267:LEU:HD22	1:D:321:LYS:HG3	1.99	0.42
1:A:165:GLU:O	1:A:169:SER:N	2.50	0.42
1:B:85:VAL:HG12	1:B:86:SER:N	2.33	0.42
1:D:29:ILE:HD13	1:D:29:ILE:N	2.34	0.42
1:E:253:SER:O	1:E:254:THR:C	2.62	0.42
1:B:235:ARG:NH2	2:B:394:PB8:H8	2.34	0.42
1:A:-1:PHE:CE2	1:A:178:GLY:HA3	2.54	0.42
1:A:357:SER:HG	1:A:359:CYS:HB3	1.83	0.42
1:B:202:ILE:HG21	1:B:382:CYS:HB2	2.01	0.42
1:B:236:LEU:HD22	1:B:240:VAL:HG11	2.01	0.42
1:E:71:TYR:CB	2:E:394:PB8:H11	2.50	0.42
1:E:83:ASP:O	1:E:96:ARG:HA	2.19	0.42
1:E:261:PHE:CD1	1:E:268:VAL:HG23	2.55	0.42
1:B:223:ASP:HA	1:B:384:TYR:CD2	2.54	0.42
1:E:32:ASP:HA	1:E:229:SER:OG	2.19	0.42
1:E:179:ILE:CD1	1:E:344:VAL:HG21	2.49	0.42
1:A:224:LYS:O	1:A:330:GLY:HA3	2.19	0.42
1:B:2:MET:SD	1:B:91:PRO:HD3	2.60	0.42
1:A:149:LEU:O	1:A:149:LEU:HD12	2.19	0.42
1:A:349:ARG:HD2	3:A:417:HOH:O	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:45:HIS:ND1	1:D:45:HIS:C	2.78	0.42
1:E:235:ARG:HA	1:E:325:SER:O	2.20	0.42
1:E:340:GLY:HA2	1:E:360:HIS:HB3	2.02	0.42
1:A:144:THR:HB	1:A:145:HIS:H	1.48	0.42
1:B:267:LEU:CD1	1:B:269:CYS:SG	3.06	0.42
1:D:175:ILE:HD13	1:D:175:ILE:N	2.35	0.42
2:D:394:PB8:O43	2:D:394:PB8:H37	2.20	0.42
2:A:394:PB8:H9	2:A:394:PB8:H28A	2.00	0.42
1:D:189:TRP:CD1	1:D:370:VAL:HG12	2.55	0.42
1:A:32:ASP:OD1	1:A:230:GLY:HA3	2.20	0.41
1:D:188:LEU:CD1	1:D:355:ALA:CB	2.95	0.41
1:D:359:CYS:O	1:D:359:CYS:SG	2.77	0.41
1:E:208:ILE:HG21	1:E:247:SER:HB3	2.01	0.41
1:A:45:HIS:ND1	1:A:46:PRO:HD2	2.35	0.41
1:A:283:ILE:HB	1:A:300:ILE:HD11	2.02	0.41
1:B:45:HIS:CD2	1:B:46:PRO:HD2	2.55	0.41
1:B:298:ILE:HB	1:B:341:PHE:CZ	2.55	0.41
1:D:37:ASN:HD21	1:D:127:ALA:HA	1.84	0.41
1:D:157:ALA:O	1:D:159:PHE:CE2	2.73	0.41
1:E:110:ILE:O	1:E:113:SER:HB3	2.20	0.41
1:B:63:LEU:HD12	1:B:80:LEU:HB3	2.00	0.41
1:B:239:LYS:NZ	1:B:239:LYS:HB3	2.35	0.41
1:D:137:PHE:HD2	1:D:347:ARG:NE	2.19	0.41
1:E:27:LEU:HB3	1:E:116:GLU:OE1	2.20	0.41
1:E:267:LEU:HD12	1:E:267:LEU:O	2.20	0.41
1:E:306:LEU:HD23	1:E:306:LEU:HA	1.83	0.41
1:A:261:PHE:CZ	1:A:322:PHE:HB2	2.55	0.41
1:A:267:LEU:C	1:A:267:LEU:CD1	2.93	0.41
1:A:346:ASP:OD1	1:A:346:ASP:C	2.63	0.41
1:D:26:THR:HG22	1:D:50:ARG:NH1	2.35	0.41
1:D:36:SER:OG	1:D:126:ILE:HG13	2.20	0.41
1:D:253:SER:C	1:D:255:GLU:N	2.76	0.41
1:E:253:SER:C	1:E:255:GLU:H	2.26	0.41
1:A:379:MET:O	1:A:381:ASP:N	2.54	0.41
1:B:203:ILE:HD11	1:B:331:THR:HG21	2.02	0.41
1:B:286:TYR:CZ	1:B:297:ARG:HD3	2.56	0.41
1:D:113:SER:O	1:D:114:ASN:HB3	2.20	0.41
1:D:222:TYR:O	1:D:330:GLY:HA2	2.21	0.41
1:A:199:TYR:O	1:A:226:ILE:HA	2.21	0.41
1:E:110:ILE:CD1	2:E:394:PB8:C30	2.99	0.41
1:A:20:VAL:HG23	1:A:52:TYR:CE1	2.56	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:205:ARG:HB3	1:B:286:TYR:HB2	2.02	0.41
1:D:124:ALA:O	1:D:125:GLU:C	2.62	0.41
1:D:311:ASP:C	1:D:314:THR:H	2.25	0.41
1:A:232:THR:HG22	1:A:233:ASN:OD1	2.20	0.41
1:D:134:GLU:HA	1:D:135:PRO:HD3	1.82	0.41
1:D:183:LEU:HB2	1:D:342:TYR:CD2	2.56	0.41
1:E:234:LEU:HB2	1:E:337:ILE:CD1	2.46	0.41
1:A:206:VAL:HG22	1:A:285:LEU:CD2	2.51	0.41
1:A:249:LYS:HE2	1:A:262:TRP:CG	2.56	0.41
1:B:125:GLU:HA	1:B:131:ASP:HB3	2.02	0.41
1:B:197:TRP:CD1	1:B:197:TRP:H	2.39	0.41
1:B:237:PRO:O	1:B:238:LYS:C	2.62	0.41
1:D:85:VAL:N	1:D:95:VAL:O	2.45	0.41
1:D:233:ASN:HD22	1:D:325:SER:HG	1.64	0.41
1:E:199:TYR:HB3	1:E:352:ILE:HD11	2.02	0.41
1:E:299:THR:O	1:E:368:ALA:HB1	2.21	0.41
1:E:334:GLY:O	1:E:337:ILE:N	2.54	0.41
1:A:32:ASP:OD2	2:A:394:PB8:O46	2.34	0.41
1:A:207:GLU:HA	1:A:211:GLN:O	2.21	0.41
1:B:14:TYR:CD2	1:B:154:LEU:HG	2.55	0.41
1:D:291:VAL:O	1:D:292:THR:C	2.64	0.41
1:E:218:LYS:CE	1:E:381:ASP:O	2.69	0.41
1:A:140:LEU:HD21	1:A:176:ILE:HG21	2.03	0.40
1:B:284:SER:HA	1:B:298:ILE:O	2.21	0.40
1:D:221:ASN:HD22	1:D:221:ASN:N	2.19	0.40
1:E:270:TRP:CE3	1:E:275:THR:HG23	2.56	0.40
1:E:293:ASN:C	1:E:379:MET:HE3	2.45	0.40
1:A:48:LEU:HD23	1:A:48:LEU:HA	1.84	0.40
1:A:137:PHE:CE1	1:A:150:PHE:HB3	2.55	0.40
1:E:222:TYR:O	1:E:330:GLY:HA2	2.21	0.40
1:E:234:LEU:HD23	1:E:324:ILE:HG21	2.03	0.40
1:A:162:ASN:O	1:A:166:VAL:HG12	2.22	0.40
1:A:205:ARG:HG2	1:A:286:TYR:CD2	2.56	0.40
1:B:342:TYR:N	1:B:355:ALA:O	2.53	0.40
1:D:45:HIS:CG	1:D:46:PRO:CD	2.99	0.40
1:A:17:GLU:HG2	1:A:88:PRO:HG2	2.03	0.40
1:D:9:LYS:HD3	1:D:166:VAL:HG22	2.03	0.40
1:D:22:SER:CB	1:D:59:THR:CG2	2.99	0.40
1:D:194:ARG:HH22	1:D:384:TYR:N	2.19	0.40
1:A:153:GLN:HG2	1:A:155:CYS:SG	2.62	0.40
2:A:394:PB8:H28B	2:A:394:PB8:H24	2.04	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:34:GLY:C	2:B:394:PB8:HN39	2.27	0.40
1:D:184:TYR:CD2	1:D:342:TYR:HD2	2.40	0.40
1:E:235:ARG:CZ	2:E:394:PB8:H8	2.52	0.40
1:E:282:VAL:HG13	1:E:366:ARG:NH1	2.36	0.40
1:E:366:ARG:HD3	3:E:417:HOH:O	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	384/455 (84%)	338 (88%)	39 (10%)	7 (2%)	6	22
1	B	384/455 (84%)	338 (88%)	42 (11%)	4 (1%)	12	35
1	D	384/455 (84%)	336 (88%)	37 (10%)	11 (3%)	3	13
1	E	384/455 (84%)	337 (88%)	38 (10%)	9 (2%)	5	17
All	All	1536/1820 (84%)	1349 (88%)	156 (10%)	31 (2%)	6	20

All (31) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	55	GLN
1	A	107	LYS
1	D	55	GLN
1	D	92	ASN
1	D	380	GLU
1	E	217	CYS
1	E	223	ASP
1	E	254	THR
1	E	271	GLN
1	E	278	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	60	TYR
1	B	217	CYS
1	B	223	ASP
1	B	358	ALA
1	D	122	ALA
1	D	166	VAL
1	D	378	ASP
1	E	358	ALA
1	A	217	CYS
1	D	125	GLU
1	A	277	TRP
1	A	358	ALA
1	D	58	SER
1	D	254	THR
1	E	163	GLN
1	A	380	GLU
1	B	314	THR
1	D	271	GLN
1	E	0	VAL
1	E	312	VAL
1	D	0	VAL

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	329/381 (86%)	291 (88%)	38 (12%)	5	16
1	B	329/381 (86%)	288 (88%)	41 (12%)	4	13
1	D	329/381 (86%)	277 (84%)	52 (16%)	2	7
1	E	329/381 (86%)	279 (85%)	50 (15%)	3	8
All	All	1316/1524 (86%)	1135 (86%)	181 (14%)	3	10

All (181) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	0	VAL
1	A	2	MET
1	A	10	SER
1	A	20	VAL
1	A	25	GLN
1	A	26	THR
1	A	27	LEU
1	A	73	GLN
1	A	85	VAL
1	A	130	ASP
1	A	131	ASP
1	A	161	LEU
1	A	162	ASN
1	A	163	GLN
1	A	166	VAL
1	A	167	LEU
1	A	170	VAL
1	A	174	MET
1	A	194	ARG
1	A	202	ILE
1	A	213	LEU
1	A	217	CYS
1	A	227	VAL
1	A	232	THR
1	A	239	LYS
1	A	265	GLU
1	A	267	LEU
1	A	278	ASN
1	A	288	MET
1	A	300	ILE
1	A	312	VAL
1	A	327	SER
1	A	328	SER
1	A	349	ARG
1	A	364	GLU
1	A	367	THR
1	A	377	LEU
1	A	381	ASP
1	B	10	SER
1	B	18	MET
1	B	59	THR
1	B	68	TYR
1	B	73	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	75	LYS
1	B	77	GLU
1	B	82	THR
1	B	94	THR
1	B	95	VAL
1	B	132	SER
1	B	142	LYS
1	B	152	LEU
1	B	153	GLN
1	B	154	LEU
1	B	167	LEU
1	B	169	SER
1	B	176	ILE
1	B	187	SER
1	B	214	LYS
1	B	217	CYS
1	B	218	LYS
1	B	226	ILE
1	B	229	SER
1	B	239	LYS
1	B	254	THR
1	B	256	LYS
1	B	266	GLN
1	B	292	THR
1	B	293	ASN
1	B	301	LEU
1	B	314	THR
1	B	315	SER
1	B	316	GLN
1	B	327	SER
1	B	329	THR
1	B	337	ILE
1	B	343	VAL
1	B	359	CYS
1	B	367	THR
1	B	375	VAL
1	D	0	VAL
1	D	3	VAL
1	D	26	THR
1	D	29	ILE
1	D	51	TYR
1	D	59	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	65	LYS
1	D	94	THR
1	D	95	VAL
1	D	125	GLU
1	D	128	ARG
1	D	130	ASP
1	D	143	GLN
1	D	144	THR
1	D	154	LEU
1	D	159	PHE
1	D	163	GLN
1	D	169	SER
1	D	175	ILE
1	D	176	ILE
1	D	185	THR
1	D	187	SER
1	D	188	LEU
1	D	197	TRP
1	D	204	VAL
1	D	213	LEU
1	D	214	LYS
1	D	221	ASN
1	D	238	LYS
1	D	246	LYS
1	D	247	SER
1	D	248	ILE
1	D	249	LYS
1	D	252	SER
1	D	263	LEU
1	D	266	GLN
1	D	284	SER
1	D	292	THR
1	D	296	PHE
1	D	299	THR
1	D	309	VAL
1	D	311	ASP
1	D	315	SER
1	D	324	ILE
1	D	328	SER
1	D	329	THR
1	D	341	PHE
1	D	352	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	362	HIS
1	D	367	THR
1	D	373	PRO
1	D	375	VAL
1	E	0	VAL
1	E	1	GLU
1	E	3	VAL
1	E	17	GLU
1	E	25	GLN
1	E	31	VAL
1	E	48	LEU
1	E	55	GLN
1	E	56	LEU
1	E	63	LEU
1	E	65	LYS
1	E	75	LYS
1	E	85	VAL
1	E	87	ILE
1	E	95	VAL
1	E	99	ILE
1	E	104	GLU
1	E	105	SER
1	E	116	GLU
1	E	141	VAL
1	E	147	PRO
1	E	154	LEU
1	E	165	GLU
1	E	170	VAL
1	E	176	ILE
1	E	183	LEU
1	E	193	ILE
1	E	195	ARG
1	E	197	TRP
1	E	200	GLU
1	E	208	ILE
1	E	217	CYS
1	E	239	LYS
1	E	247	SER
1	E	253	SER
1	E	298	ILE
1	E	300	ILE
1	E	301	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	E	312	VAL
1	E	314	THR
1	E	317	ASP
1	E	324	ILE
1	E	352	ILE
1	E	363	ASP
1	E	364	GLU
1	E	367	THR
1	E	376	THR
1	E	379	MET
1	E	380	GLU
1	E	381	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (15) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	114	ASN
1	A	162	ASN
1	A	211	GLN
1	A	271	GLN
1	B	53	GLN
1	B	143	GLN
1	B	153	GLN
1	B	211	GLN
1	B	271	GLN
1	B	360	HIS
1	D	12	GLN
1	D	37	ASN
1	D	98	ASN
1	E	114	ASN
1	E	153	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

4 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	PB8	A	394	-	52,52,52	2.31	15 (28%)	58,74,74	2.63	22 (37%)
2	PB8	D	394	-	52,52,52	2.29	12 (23%)	58,74,74	3.00	28 (48%)
2	PB8	E	394	-	52,52,52	2.04	15 (28%)	58,74,74	2.97	26 (44%)
2	PB8	B	394	-	52,52,52	2.14	13 (25%)	58,74,74	3.06	27 (46%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	PB8	A	394	-	-	7/39/64/64	0/5/5/5
2	PB8	D	394	-	-	7/39/64/64	0/5/5/5
2	PB8	E	394	-	-	14/39/64/64	0/5/5/5
2	PB8	B	394	-	-	18/39/64/64	0/5/5/5

All (55) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	394	PB8	C7-C14	7.87	1.52	1.39
2	E	394	PB8	C27-C19	-6.01	1.47	1.52
2	B	394	PB8	C6-C13	5.77	1.49	1.39
2	D	394	PB8	C27-C19	-5.69	1.47	1.52
2	D	394	PB8	C14-C13	-5.69	1.29	1.40
2	D	394	PB8	C3-C2	5.69	1.50	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	394	PB8	C7-C14	5.54	1.48	1.39
2	A	394	PB8	C14-C13	-5.49	1.29	1.40
2	B	394	PB8	C14-C13	-5.48	1.29	1.40
2	B	394	PB8	C7-C14	5.39	1.48	1.39
2	E	394	PB8	C7-C14	5.22	1.48	1.39
2	A	394	PB8	C6-C13	5.19	1.48	1.39
2	B	394	PB8	C2-C6	-5.15	1.30	1.38
2	A	394	PB8	C23-N39	5.08	1.53	1.46
2	B	394	PB8	C3-C2	4.98	1.49	1.38
2	A	394	PB8	C26-N39	4.74	1.54	1.47
2	D	394	PB8	C3-C7	-4.69	1.30	1.38
2	D	394	PB8	C6-C13	4.65	1.47	1.39
2	A	394	PB8	C3-C2	4.49	1.48	1.38
2	E	394	PB8	C3-C2	4.26	1.47	1.38
2	E	394	PB8	C2-C6	-4.17	1.31	1.38
2	D	394	PB8	C2-C6	-4.12	1.31	1.38
2	E	394	PB8	C3-C7	-3.99	1.32	1.38
2	D	394	PB8	C12-C17	3.64	1.43	1.37
2	B	394	PB8	C36-C38	3.58	1.59	1.53
2	D	394	PB8	C26-N39	3.56	1.52	1.47
2	D	394	PB8	C35-N40	-3.55	1.41	1.46
2	E	394	PB8	C6-C13	3.43	1.45	1.39
2	E	394	PB8	C26-N39	3.35	1.52	1.47
2	B	394	PB8	C23-N39	3.33	1.51	1.46
2	B	394	PB8	C35-N40	3.32	1.50	1.46
2	A	394	PB8	C5-C1	3.31	1.45	1.38
2	B	394	PB8	C3-C7	-3.15	1.33	1.38
2	E	394	PB8	C34-C35	-3.10	1.48	1.53
2	E	394	PB8	C14-C13	-3.08	1.34	1.40
2	A	394	PB8	C35-N40	-2.83	1.42	1.46
2	A	394	PB8	C3-C7	-2.68	1.34	1.38
2	A	394	PB8	C2-C6	-2.59	1.34	1.38
2	B	394	PB8	C32-C38	-2.55	1.48	1.53
2	A	394	PB8	C36-C26	2.49	1.57	1.53
2	A	394	PB8	C4-C8	2.40	1.43	1.38
2	B	394	PB8	C28-C20	2.38	1.55	1.50
2	B	394	PB8	C20-N41	2.38	1.38	1.34
2	E	394	PB8	C35-N40	-2.36	1.43	1.46
2	D	394	PB8	O45-C21	-2.34	1.18	1.23
2	E	394	PB8	C8-C15	2.32	1.43	1.38
2	E	394	PB8	C23-N39	2.32	1.49	1.46
2	A	394	PB8	C27-C19	-2.30	1.50	1.52

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	E	394	PB8	F48-C18	-2.22	1.31	1.36
2	E	394	PB8	C20-N41	2.22	1.38	1.34
2	D	394	PB8	C9-C15	2.18	1.43	1.38
2	A	394	PB8	C8-C15	2.09	1.43	1.38
2	B	394	PB8	C11-C16	-2.08	1.35	1.39
2	E	394	PB8	C35-C21	-2.07	1.48	1.52
2	A	394	PB8	C19-N40	-2.00	1.31	1.34

All (103) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	394	PB8	C25-N40-C19	-9.94	107.14	113.47
2	D	394	PB8	O43-C19-C27	-9.87	118.06	126.75
2	B	394	PB8	C28-C20-N41	9.66	127.95	115.94
2	E	394	PB8	C16-C10-C17	8.70	126.33	118.75
2	E	394	PB8	O43-C19-C27	-8.47	119.30	126.75
2	A	394	PB8	C28-C20-N41	8.33	126.30	115.94
2	D	394	PB8	C27-C33-C37	-7.28	105.34	118.27
2	D	394	PB8	C28-C20-N41	7.08	124.75	115.94
2	B	394	PB8	C12-C17-C10	-6.70	115.35	123.50
2	E	394	PB8	C12-C17-C10	-6.65	115.41	123.50
2	D	394	PB8	C27-N41-C20	6.26	131.79	122.98
2	E	394	PB8	F47-C17-C12	6.15	127.03	118.28
2	A	394	PB8	C24-C25-N40	5.84	109.42	103.19
2	A	394	PB8	C27-C33-C37	-5.75	108.06	118.27
2	A	394	PB8	C2-C3-C7	-5.70	113.21	120.24
2	D	394	PB8	C32-C38-N42	-5.49	102.28	110.08
2	A	394	PB8	C16-C11-C18	5.37	123.43	118.75
2	E	394	PB8	C34-C31-C15	-5.36	95.57	113.22
2	E	394	PB8	C25-N40-C19	-5.16	110.18	113.47
2	A	394	PB8	C27-N41-C20	5.15	130.23	122.98
2	B	394	PB8	C16-C10-C17	5.14	123.23	118.75
2	B	394	PB8	C24-C25-N40	5.02	108.55	103.19
2	B	394	PB8	O44-C20-C28	-4.80	113.51	122.05
2	E	394	PB8	C27-N41-C20	4.73	129.64	122.98
2	E	394	PB8	C28-C20-N41	4.49	121.53	115.94
2	D	394	PB8	C2-C3-C7	-4.46	114.74	120.24
2	D	394	PB8	C14-C23-N39	-4.44	102.67	113.25
2	B	394	PB8	C33-C27-N41	4.36	118.18	108.96
2	B	394	PB8	F47-C17-C12	4.27	124.36	118.28
2	A	394	PB8	O44-C20-N41	-4.23	116.36	122.23
2	D	394	PB8	O43-C19-N40	4.18	131.78	126.27

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	394	PB8	C27-N41-C20	4.05	128.68	122.98
2	B	394	PB8	C18-C12-C17	3.95	121.84	116.08
2	D	394	PB8	C12-C17-C10	-3.86	118.81	123.50
2	B	394	PB8	C35-N40-C19	3.84	126.71	122.12
2	D	394	PB8	C12-C18-C11	-3.78	118.91	123.50
2	E	394	PB8	O44-C20-C28	-3.76	115.36	122.05
2	A	394	PB8	C1-C4-C8	-3.62	115.78	120.24
2	E	394	PB8	C14-C23-N39	-3.61	104.64	113.25
2	D	394	PB8	O46-C36-C26	-3.61	100.63	109.28
2	B	394	PB8	C38-N42-C21	-3.56	117.05	123.25
2	D	394	PB8	C32-C16-C10	-3.47	114.48	120.43
2	D	394	PB8	C24-C27-N41	3.46	116.57	110.28
2	E	394	PB8	C13-C22-C26	-3.43	106.78	113.56
2	D	394	PB8	O44-C20-C28	-3.42	115.96	122.05
2	D	394	PB8	C18-C12-C17	3.40	121.04	116.08
2	B	394	PB8	C16-C11-C18	-3.39	115.80	118.75
2	A	394	PB8	C25-N40-C19	-3.35	111.33	113.47
2	B	394	PB8	O46-C36-C38	3.29	117.17	109.28
2	B	394	PB8	C32-C38-N42	-3.26	105.45	110.08
2	A	394	PB8	O46-C36-C26	3.23	117.03	109.28
2	B	394	PB8	C32-C16-C10	-3.23	114.89	120.43
2	D	394	PB8	C7-C14-C13	3.21	122.91	118.98
2	D	394	PB8	F47-C17-C12	3.12	122.72	118.28
2	A	394	PB8	O43-C19-C27	-3.12	124.01	126.75
2	E	394	PB8	F48-C18-C11	-3.05	113.94	118.28
2	A	394	PB8	C3-C7-C14	3.03	125.32	120.88
2	E	394	PB8	C25-N40-C35	3.02	128.12	123.09
2	A	394	PB8	C32-C38-N42	-2.99	105.83	110.08
2	E	394	PB8	C1-C4-C8	-2.98	116.56	120.24
2	D	394	PB8	C34-C31-C15	-2.98	103.43	113.22
2	A	394	PB8	C9-C15-C8	2.95	122.62	118.23
2	E	394	PB8	C38-N42-C21	2.93	128.34	123.25
2	E	394	PB8	C24-C27-N41	2.91	115.58	110.28
2	D	394	PB8	C4-C8-C15	-2.81	116.65	120.61
2	E	394	PB8	C16-C11-C18	-2.79	116.32	118.75
2	A	394	PB8	C30-C37-C29	-2.76	98.20	110.53
2	E	394	PB8	O45-C21-C35	2.69	127.17	120.69
2	B	394	PB8	O44-C20-N41	-2.66	118.54	122.23
2	B	394	PB8	O43-C19-N40	-2.66	122.77	126.27
2	A	394	PB8	O44-C20-C28	-2.65	117.34	122.05
2	B	394	PB8	C1-C5-C9	2.62	123.47	120.24
2	B	394	PB8	C14-C23-N39	-2.58	107.09	113.25

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	394	PB8	O45-C21-N42	-2.57	118.36	122.96
2	E	394	PB8	C16-C32-C38	-2.56	109.05	113.40
2	E	394	PB8	C32-C16-C11	2.54	124.80	120.43
2	E	394	PB8	C23-C14-C7	-2.54	115.77	120.97
2	E	394	PB8	C27-C33-C37	-2.52	113.80	118.27
2	E	394	PB8	C22-C13-C6	-2.49	114.92	121.58
2	E	394	PB8	C12-C18-C11	2.46	126.50	123.50
2	B	394	PB8	C5-C9-C15	-2.40	117.24	120.61
2	A	394	PB8	C5-C9-C15	-2.38	117.27	120.61
2	B	394	PB8	C21-C35-N40	-2.36	106.24	111.71
2	D	394	PB8	C1-C4-C8	2.34	123.12	120.24
2	B	394	PB8	C3-C2-C6	-2.33	117.36	120.24
2	E	394	PB8	C22-C13-C14	2.31	125.27	120.33
2	B	394	PB8	O45-C21-C35	2.28	126.18	120.69
2	A	394	PB8	C22-C13-C14	2.26	125.16	120.33
2	A	394	PB8	O45-C21-N42	-2.26	118.92	122.96
2	D	394	PB8	C9-C15-C8	2.24	121.56	118.23
2	D	394	PB8	C32-C16-C11	2.20	124.20	120.43
2	E	394	PB8	C30-C37-C29	-2.18	100.82	110.53
2	D	394	PB8	F48-C18-C11	2.17	121.36	118.28
2	D	394	PB8	C33-C27-N41	2.15	113.51	108.96
2	A	394	PB8	C34-C31-C15	-2.15	106.16	113.22
2	B	394	PB8	C2-C6-C13	2.15	124.02	120.88
2	D	394	PB8	C6-C13-C14	-2.13	116.37	118.98
2	D	394	PB8	C22-C13-C14	2.13	124.88	120.33
2	D	394	PB8	O44-C20-N41	-2.13	119.28	122.23
2	D	394	PB8	C13-C22-C26	-2.12	109.37	113.56
2	B	394	PB8	C27-C33-C37	2.09	121.98	118.27
2	A	394	PB8	C2-C6-C13	2.01	123.82	120.88
2	A	394	PB8	C12-C18-C11	-2.00	121.07	123.50

There are no chirality outliers.

All (46) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	394	PB8	C28-C20-N41-C27
2	A	394	PB8	O44-C20-N41-C27
2	A	394	PB8	N39-C26-C36-O46
2	B	394	PB8	C28-C20-N41-C27
2	B	394	PB8	O44-C20-N41-C27
2	B	394	PB8	C19-C27-C33-C37
2	B	394	PB8	C24-C27-C33-C37

Continued on next page...

Continued from previous page...

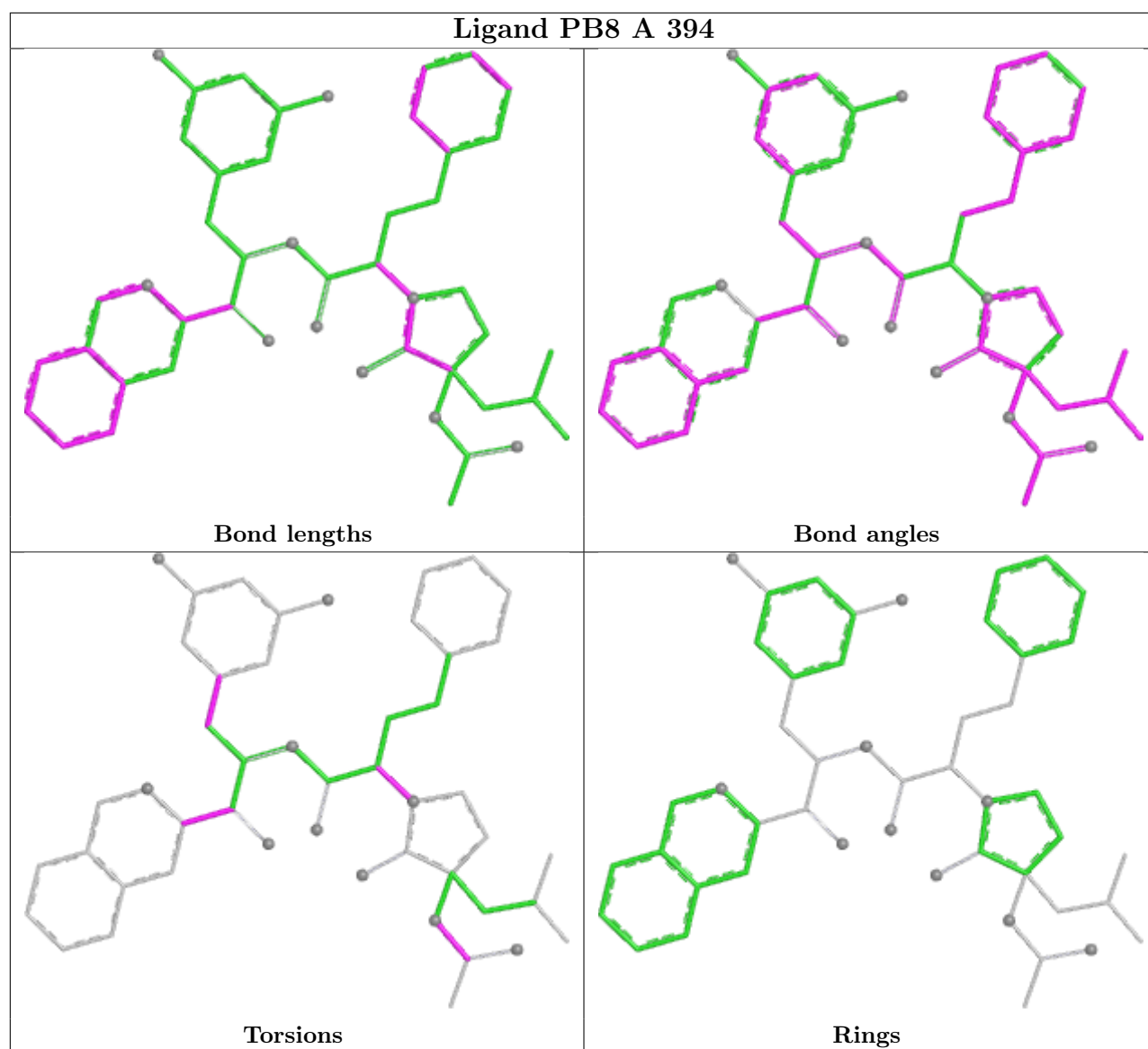
Mol	Chain	Res	Type	Atoms
2	B	394	PB8	C24-C27-N41-C20
2	B	394	PB8	C31-C34-C35-N40
2	B	394	PB8	C34-C35-N40-C25
2	B	394	PB8	O46-C36-C38-N42
2	D	394	PB8	C28-C20-N41-C27
2	D	394	PB8	O44-C20-N41-C27
2	E	394	PB8	C28-C20-N41-C27
2	E	394	PB8	O44-C20-N41-C27
2	E	394	PB8	C19-C27-C33-C37
2	E	394	PB8	C24-C27-C33-C37
2	E	394	PB8	C31-C34-C35-N40
2	E	394	PB8	C34-C35-N40-C19
2	E	394	PB8	C24-C27-N41-C20
2	B	394	PB8	C27-C33-C37-C30
2	E	394	PB8	C34-C35-N40-C25
2	B	394	PB8	C21-C35-N40-C25
2	E	394	PB8	C21-C35-N40-C25
2	A	394	PB8	N39-C26-C36-C38
2	D	394	PB8	C31-C34-C35-N40
2	B	394	PB8	C19-C27-N41-C20
2	B	394	PB8	C10-C16-C32-C38
2	A	394	PB8	C10-C16-C32-C38
2	A	394	PB8	C11-C16-C32-C38
2	D	394	PB8	C11-C16-C32-C38
2	D	394	PB8	C10-C16-C32-C38
2	D	394	PB8	C21-C35-N40-C25
2	B	394	PB8	C11-C16-C32-C38
2	E	394	PB8	C31-C34-C35-C21
2	B	394	PB8	N41-C27-C33-C37
2	E	394	PB8	N41-C27-C33-C37
2	E	394	PB8	C10-C16-C32-C38
2	E	394	PB8	C11-C16-C32-C38
2	B	394	PB8	C33-C27-N41-C20
2	A	394	PB8	C34-C35-N40-C25
2	D	394	PB8	C34-C35-N40-C25
2	B	394	PB8	N39-C26-C36-O46
2	B	394	PB8	C22-C26-C36-O46
2	B	394	PB8	C9-C15-C31-C34
2	E	394	PB8	C8-C15-C31-C34

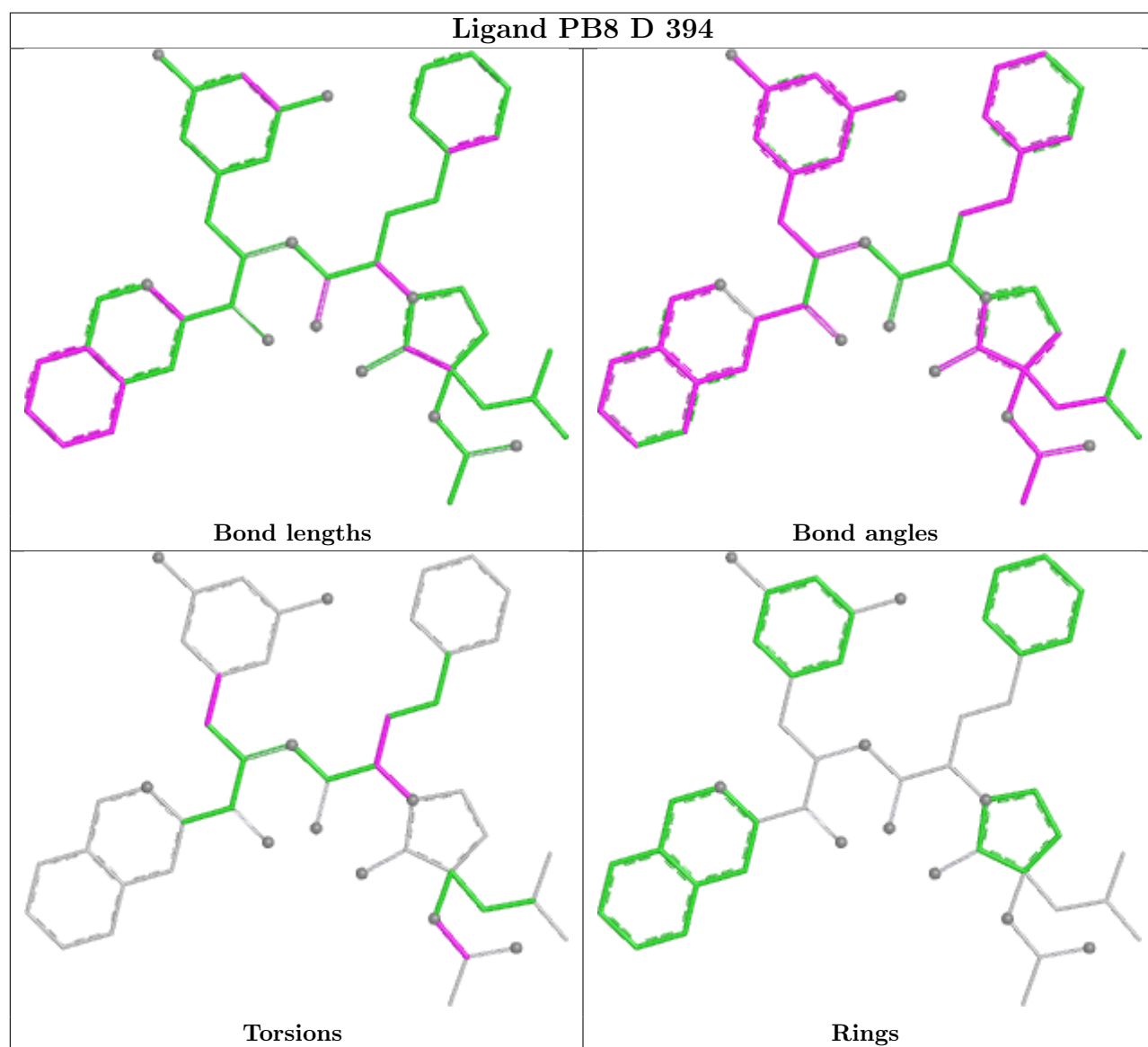
There are no ring outliers.

4 monomers are involved in 33 short contacts:

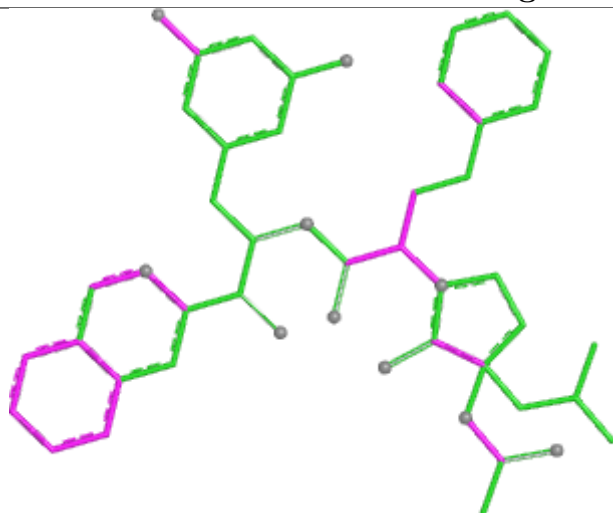
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	394	PB8	10	0
2	D	394	PB8	5	0
2	E	394	PB8	10	0
2	B	394	PB8	8	0

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 than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

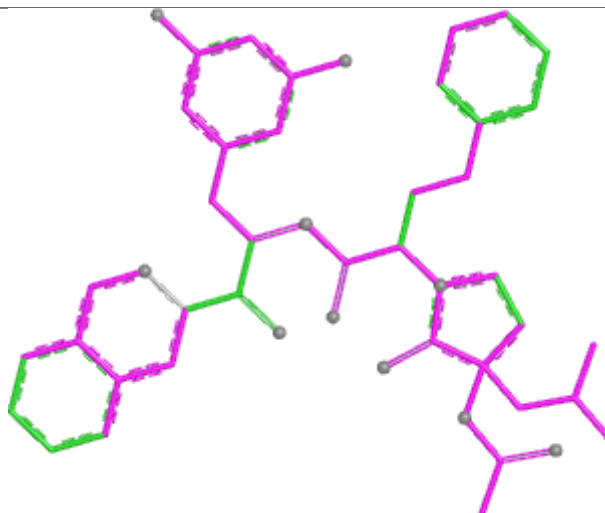




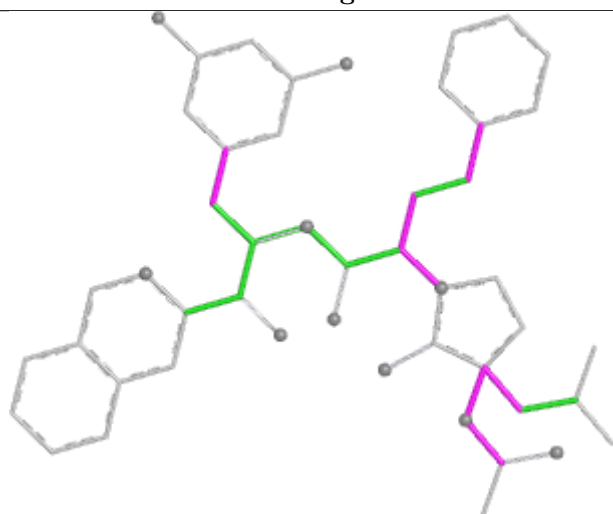
Ligand PB8 E 394



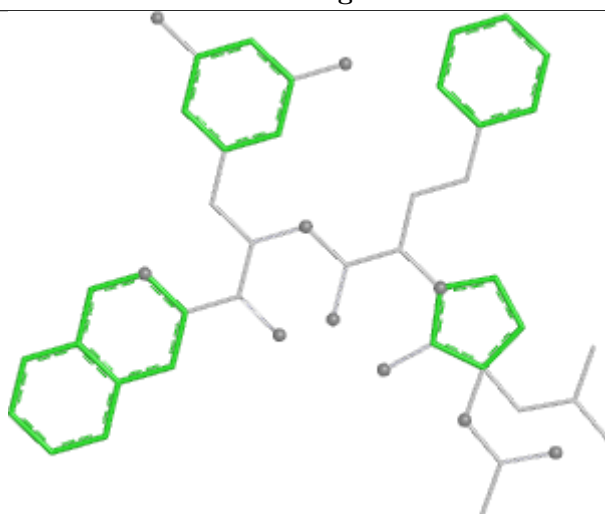
Bond lengths



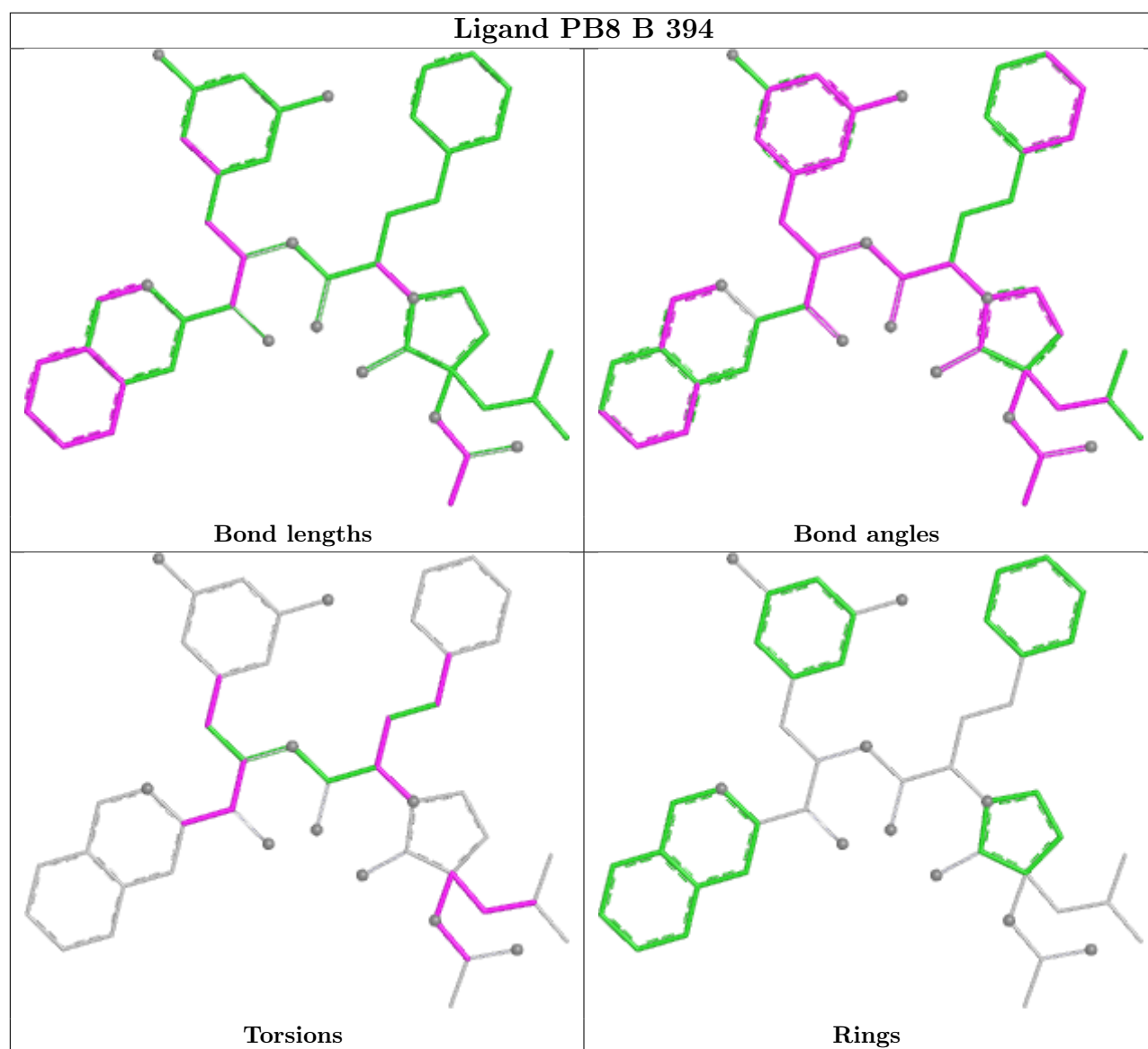
Bond angles



Torsions



Rings



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	386/455 (84%)	0.37	15 (3%) 43 35	4, 18, 36, 59	0
1	B	386/455 (84%)	0.26	11 (2%) 55 46	3, 16, 35, 47	0
1	D	386/455 (84%)	0.64	22 (5%) 29 23	10, 24, 39, 59	0
1	E	386/455 (84%)	0.63	25 (6%) 25 20	10, 23, 41, 57	0
All	All	1544/1820 (84%)	0.48	73 (4%) 36 29	3, 20, 38, 59	0

All (73) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	376	THR	5.5
1	B	314	THR	5.4
1	E	312	VAL	4.8
1	D	377	LEU	4.8
1	B	376	THR	4.7
1	A	376	THR	4.5
1	D	384	TYR	4.5
1	E	377	LEU	4.3
1	A	377	LEU	4.2
1	D	378	ASP	3.9
1	E	311	ASP	3.9
1	B	313	ALA	3.7
1	E	168	ALA	3.5
1	D	258	PRO	3.5
1	D	383	GLY	3.5
1	D	293	ASN	3.5
1	D	145	HIS	3.4
1	D	185	THR	3.4
1	D	103	THR	3.4
1	A	378	ASP	3.1
1	A	312	VAL	3.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	A	364	GLU	3.1
1	E	384	TYR	3.0
1	E	181	HIS	3.0
1	A	375	VAL	3.0
1	E	309	VAL	2.8
1	A	311	ASP	2.8
1	E	330	GLY	2.8
1	D	375	VAL	2.7
1	D	376	THR	2.7
1	E	314	THR	2.7
1	E	0	VAL	2.7
1	E	169	SER	2.7
1	A	51	TYR	2.6
1	D	273	GLY	2.6
1	E	380	GLU	2.6
1	B	105	SER	2.6
1	D	74	GLY	2.6
1	D	43	ALA	2.6
1	E	23	PRO	2.5
1	B	312	VAL	2.5
1	E	141	VAL	2.5
1	A	380	GLU	2.5
1	D	68	TYR	2.4
1	A	381	ASP	2.4
1	E	165	GLU	2.4
1	B	162	ASN	2.4
1	B	330	GLY	2.4
1	A	384	TYR	2.4
1	B	273	GLY	2.3
1	E	378	ASP	2.3
1	B	310	GLU	2.3
1	E	315	SER	2.3
1	D	105	SER	2.3
1	D	186	GLY	2.3
1	E	47	PHE	2.3
1	E	263	LEU	2.2
1	A	73	GLN	2.2
1	E	148	ASN	2.2
1	A	379	MET	2.2
1	D	168	ALA	2.2
1	D	313	ALA	2.2
1	E	272	ALA	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	E	72	THR	2.1
1	E	262	TRP	2.1
1	B	311	ASP	2.1
1	B	68	TYR	2.1
1	E	383	GLY	2.0
1	A	328	SER	2.0
1	D	360	HIS	2.0
1	D	172	GLY	2.0
1	D	300	ILE	2.0
1	A	214	LYS	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

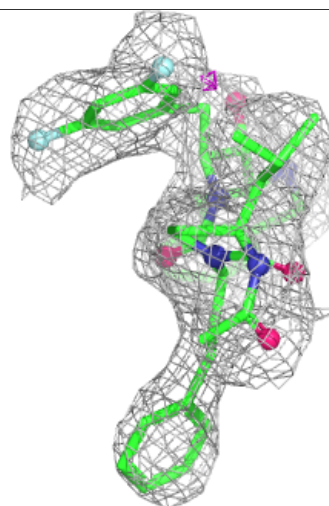
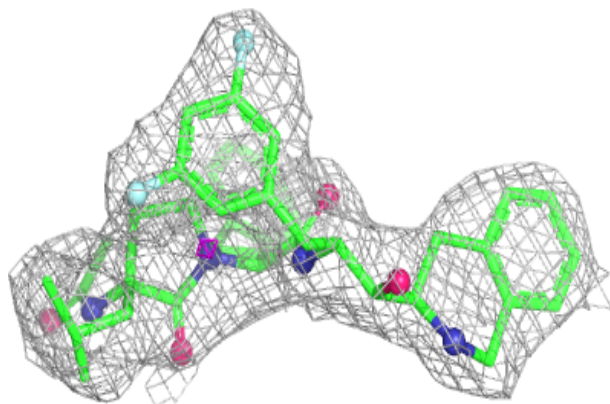
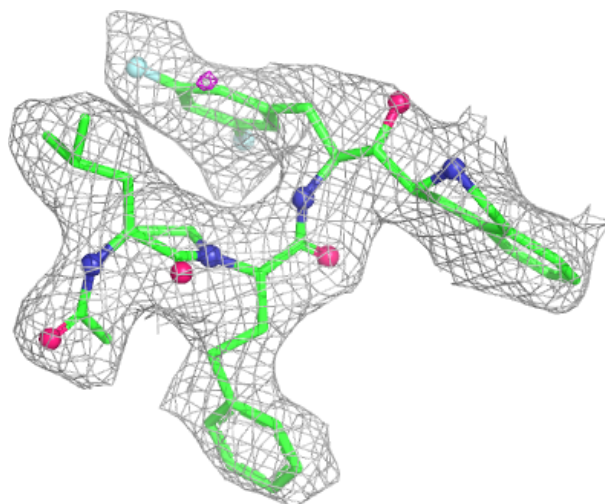
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	PB8	E	394	48/48	0.91	0.12	6,15,20,22	0
2	PB8	A	394	48/48	0.92	0.11	2,11,21,24	0
2	PB8	D	394	48/48	0.93	0.11	3,15,24,25	0
2	PB8	B	394	48/48	0.93	0.10	3,10,15,20	0

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

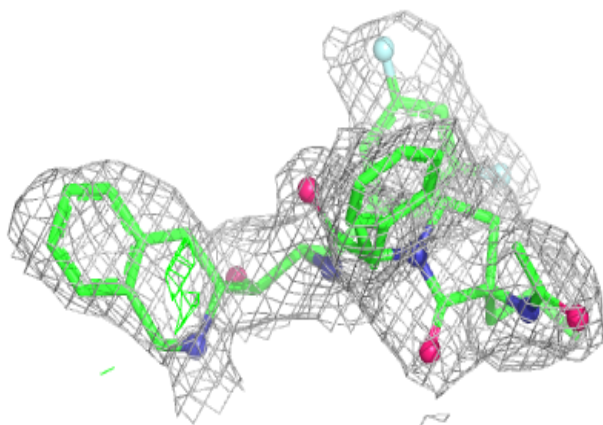
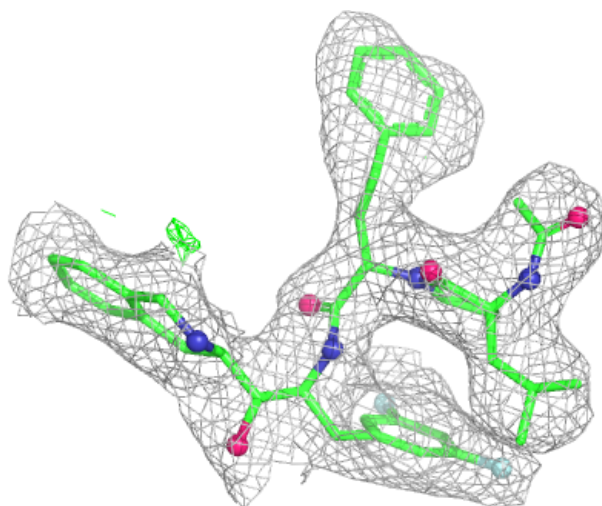
Electron density around PB8 E 394:

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



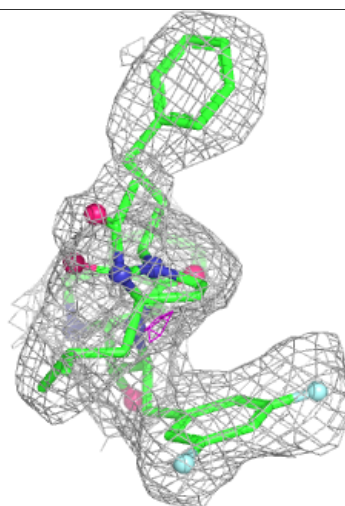
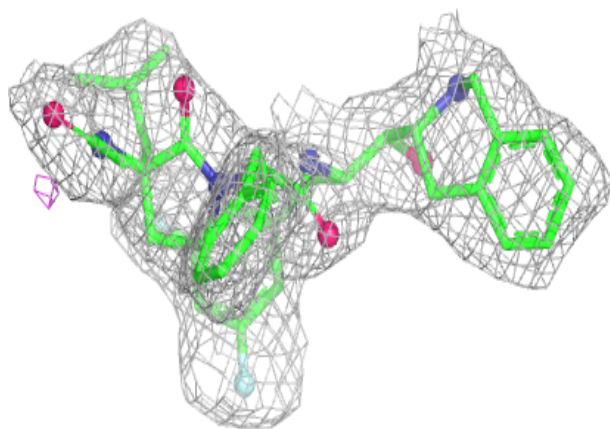
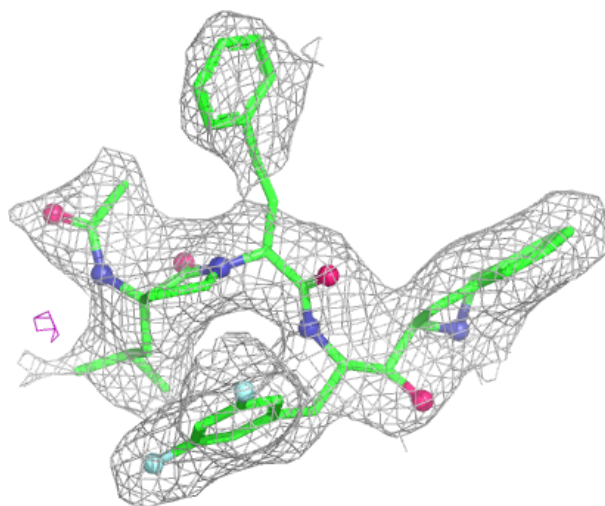
Electron density around PB8 A 394:

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



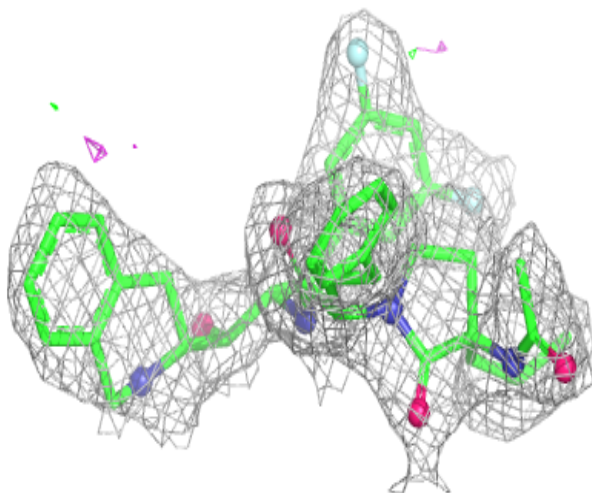
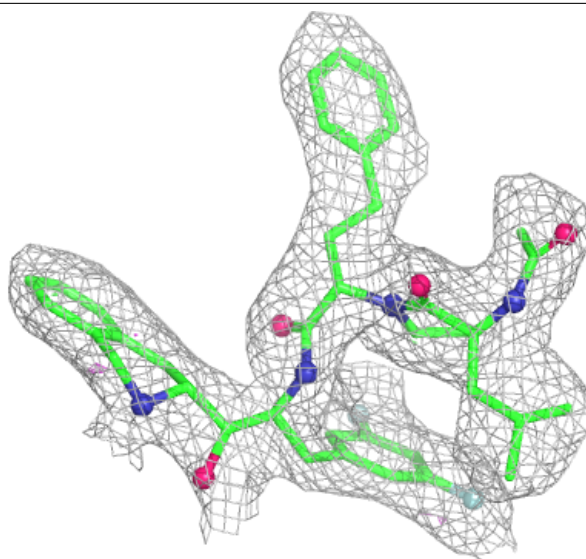
Electron density around PB8 D 394:

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



Electron density around PB8 B 394:

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



6.5 Other polymers [i](#)

There are no such residues in this entry.