

**Table S5.** The AMBER atom types and RESP charges of the 100 protein-bound ligands. The atom labels are shown in Figures S7–S13.

13gs			H19	HC	0.065	N4	NB	-0.652	C2	C	0.455
N1	NA	-0.009	H20	HC	0.065	C1	CV	1.277	O1	O	-0.476
H1	H	0.300	H21	H	0.217	C2	CA	-0.616	N2	N	-0.521
C1	CA	-0.151	C9	C*	-0.027	C7	CA	-0.021	H14	H	0.324
H2	H4	0.218	C8	C*	-0.112	C6	CA	-0.075	C7	CT	0.109
C2	CA	-0.047	H13	HA	0.169	C5	CA	-0.247	C9	CT	-0.067
H3	HA	0.180	C6	CA	-0.089	C4	CA	-0.144	C10	CA	-0.026
C3	CA	0.021	S2	S	0.148	H1	HA	0.107	C11	CA	-0.127
H14	HA	0.160	C7	CA	-0.187	H2	HA	0.135	C13	CA	-0.165
C4	CA	-0.087	S3	SY	1.168	H3	HA	0.098	C15	CA	-0.092
H4	HA	0.151	O4	O	-0.612	H4	HA	0.076	C14	CA	-0.165
C5	CA	0.135	O5	O	-0.612	C3	CA	0.305	C12	CA	-0.127
N2	NH	-0.530	N2	NT	0.979	C8	CA	-0.149	H19	HA	0.133
H5	H	0.390	H12	H	0.379	C13	CA	-0.098	H21	HA	0.155
S1	SY	0.929				C12	CA	-0.164	H22	HA	0.144
O1	O	-0.485				H7	HA	0.139	H20	HA	0.155
O2	O	-0.485	1a4k			H8	HA	0.123	H18	HA	0.133
C6	CA	-0.005	C1	CT	-0.405	C9	CA	-0.098	H16	HC	0.060
C9	CA	-0.168	H1	HC	0.114	H5	HA	0.123	H17	HC	0.060
H8	HA	0.171	H2	HC	0.114	C10	CA	-0.164	H15	H1	0.098
C10	CA	-0.212	H3	HC	0.114	H6	HA	0.139	C8	C	0.576
H9	HA	0.175	C2	C	0.687	C11	CA	-0.025	O2	O	-0.600
C7	CA	-0.168	O1	O	-0.547	C14	CT	0.011	N3	N	-0.463
H6	HA	0.171	N1	N	-0.429	H9	H1	0.060	H23	H	0.311
C8	CA	-0.212	H4	H	0.249	H10	H1	0.060	C16	CT	-0.051
H7	HA	0.175	C3	CA	0.107	N5	N*	0.016	H24	H1	0.113
C11	CA	0.370	C6	CA	-0.127	C15	CA	0.228	H25	H1	0.113
N3	NE	-0.343	H7	HA	0.141	C16	CT	-0.160	C17	CA	0.031
N4	NF	0.017	C7	CA	-0.234	C17	CT	0.009	C18	CA	-0.174
C12	CA	0.083	H8	HA	0.179	C18	CT	0.050	H26	HA	0.161
C13	CA	-0.142	C4	CA	-0.127	C19	CT	0.039	C19	CA	-0.209
H10	HA	0.012	H6	HA	0.141	H17	HC	-0.024	H27	HA	0.174
C14	CA	0.031	C5	CA	-0.234	H18	HC	-0.024	C20	CA	0.310
C15	C	0.752	H5	HA	0.179	H19	HC	-0.024	F1	F	-0.187
O3	O	-0.718	C8	CA	0.149	H15	HC	-0.008	C21	CA	-0.209
O4	O	-0.718	N2	N	-0.039	H16	HC	-0.008	H28	HA	0.174
C16	CA	0.240	C10	C	0.403	H13	HC	-0.015	C22	CA	-0.174
O5	OH	-0.499	O3	O	-0.518	H14	HC	-0.015	H29	HA	0.161
H11	HO	0.417	C9	C	0.386	H11	HC	0.136			
C17	CA	-0.363	O2	O	-0.488	H12	HC	0.136			
H12	HA	0.178	C17	CT	0.004	N6	NC	-0.531	1aoe		
C18	CA	-0.059	H19	HC	0.074	C20	CA	0.307	N5	NH	-0.975
H13	HA	0.125	C11	CT	-0.144	C21	CM	-0.267	H7	H	0.463
			H18	HC	0.077	H20	HA	0.166	H8	H	0.463
			C12	CT	0.102	C22	CA	-0.155	C4	CA	0.766
1a42			C15	CT	-0.116	H21	HA	0.172	N2	NA	-0.330
C1	CT	-0.058	C16	CT	-0.164	C23	CA	0.288	H20	H	0.334
H1	HC	0.026	H13	HC	0.082	O1	OH	-0.619	N1	NC	-0.607
H2	HC	0.026	H14	HC	0.082	H22	HO	0.444	C3	CM	0.559
H3	HC	0.026	H15	HC	0.034	C24	CA	-0.313	N3	NH	-0.764
C2	CT	0.176	H16	HC	0.034	H23	HA	0.178	H1	H	0.407
H4	H1	0.026	H17	HC	0.010	C25	CA	-0.047	H2	H	0.407
H5	H1	0.026	C13	CT	-0.116	C26	C	0.430	C2	CA	0.033
O1	OS	-0.450	H11	HC	0.034	O2	O	-0.556	C1	CA	0.040
C3	CT	0.134	H12	HC	0.034				C5	CA	-0.271
H6	H1	0.075	C14	CT	-0.164				H3	HA	0.197
H7	H1	0.075	H9	HC	0.082	1afq			C6	CA	-0.136
C4	CT	-0.045	H10	HC	0.082	C5	CT	-0.099	H4	HA	0.185
H8	H1	0.113	C18	CT	0.409	H7	HC	0.034	C7	CB	0.070
H9	H1	0.113	N3	N	-0.849	H8	HC	0.034	C8	CB	-0.007
N1	NT	-0.271	H20	H	0.383	H9	HC	0.034	C9	C*	-0.430
S1	SY	0.759	C19	C	0.905	C4	CT	0.107	H5	HA	0.204
O2	O	-0.439	O4	O	-0.604	C6	CT	-0.099	C10	CA	-0.035
O3	O	-0.439	O5	OS	-0.452	H10	HC	0.034	H6	H4	0.202
C5	CT	-0.218	C20	CT	0.062	H11	HC	0.034	N4	N*	0.085
H10	H1	0.150	H21	H1	0.029	H12	HC	0.034	C11	CT	-0.011
H11	H1	0.150	H22	H1	0.029	H6	HC	0.065	C14	CT	-0.150
C10	CT	0.000	C21	C	0.855	C3	CT	-0.309	C15	CT	-0.046
H14	HP	0.123	O7	O	-0.807	H4	HC	0.140	H17	HC	0.024
N3	N3	-0.008	O6	O	-0.807	H5	HC	0.140	H18	HC	0.024
H15	H	0.217				C1	CT	-0.005	H19	HC	0.024
C11	CT	0.035				N1	N3	-0.421	H15	HC	0.074
H16	HP	0.074	1a8t			H1	H	0.339	H16	HC	0.074
H17	HP	0.074	N1	NB	-0.652	H2	H	0.339	H9	H1	0.103
C12	CT	-0.128	N2	NB	-0.192	H13	H	0.339	C12	CT	-0.150
H18	HC	0.065	N3	NB	-0.192	H3	HP	0.145	H10	HC	0.074

# Local Minimum Conformation

H11	HC	0.074	S1	SY	1.125	C17	CA	-0.226	C10	CA	0.092
C13	CT	-0.046	N2	NT	-0.984	H21	HA	0.141	C11	CA	-0.149
H12	HC	0.024	H9	H	0.349	C18	CA	0.295	H22	HA	0.134
H13	HC	0.024	O1	O	-0.627	O8	OS	-0.338	C12	CA	-0.026
H14	HC	0.024	O2	O	-0.627	C19	CT	0.001	H23	H4	0.222
			C2	C*	-0.190	H22	H1	0.069	N3	NA	-0.213
			H1	HA	0.157	H23	H1	0.069	H24	H	0.353
1at1			C3	C*	-0.045	H24	H1	0.069	C13	CA	0.116
C1	CT	-0.215	H2	HA	0.140				C14	CA	-0.139
H1	HC	0.029	C4	CA	-0.074				H25	HA	0.164
H2	HC	0.029	S3	SY	0.921	1br6			C18	CA	-0.002
H3	HC	0.029	O3	O	-0.535	N1	NC	-0.653	CI1	CI	0.018
C2	CT	0.350	O4	O	-0.535	C2	CA	0.218	C17	CA	0.004
C3	CT	-0.215	N1	NT	-0.576	C1	C	0.752	H27	HA	0.157
H4	HC	0.029	H3	H	0.392	O2	O	-0.577	C16	CA	-0.319
H5	HC	0.029	C5	CT	-0.005	N4	NC	-0.741	H26	HA	0.204
H6	HC	0.029	H4	H1	0.119	C4	CA	0.715	C15	CA	0.157
H7	HC	-0.003	H5	H1	0.119	N3	NH	-0.913			
C4	CT	0.063	C6	CA	-0.030	H1	H	0.400	1cim		
H8	HC	-0.049	C7	C*	-0.025	H2	H	0.400	O1	O	-0.630
H9	HC	-0.049	H6	HA	0.153	N2	NA	-0.501	S1	SY	1.212
C5	CT	0.028	C8	C*	-0.290	H11	H	0.352	O2	O	-0.630
C6	CT	-0.197	H7	HA	0.184	C3	CA	0.342			
S1	SH	-0.421	C9	CA	-0.188	N5	NC	-0.504	N1	NT	-1.000
H10	HS	0.237	H8	H4	0.207	C6	CA	0.099	H1	H	0.382
H11	H1	0.136	S4	S	-0.068	H10	H4	0.140	C1	CA	-0.105
H12	H1	0.136				C5	CA	0.474	S2	S	0.169
H13	HC	0.037				C8	CT	0.039	C2	C*	-0.205
C7	C	0.279	1bqo			H3	H1	0.085	H2	HA	0.165
O1	O	-0.489	C1	CT	0.001	H4	H1	0.085	C4	C*	-0.003
N1	N	-0.424	H1	H1	0.069	N6	NH	-0.857	C3	CA	-0.217
H24	H	0.322	H2	H1	0.069	H5	H	0.403	S3	SY	0.990
C8	CT	0.042	H3	H1	0.069	C9	CA	0.334	O3	O	-0.528
C9	C	0.822	O1	OS	-0.338	C11	CA	-0.244	O4	O	-0.528
O2	O	-0.784	C2	CA	0.295	C13	CA	-0.179	C7	CT	-0.036
O3	O	-0.784	C5	CA	-0.226	H8	HA	0.152	C8	CT	-0.206
H14	H1	0.053	H6	HA	0.141	H9	HA	0.119	H8	HC	0.087
C10	CT	0.003	C6	CA	-0.103	C10	CA	-0.244	H9	HC	0.087
H15	HC	0.007	H7	HA	0.140	H6	HA	0.119	H10	HC	0.087
H16	HC	0.007	C3	CA	-0.226	C12	CA	-0.179	H11	H1	0.063
C11	CA	0.047	H5	HA	0.141	H7	HA	0.152	C6	CT	-0.075
C12	CA	-0.240	C4	CA	-0.103	C14	CA	-0.015	H6	HC	0.076
H18	HA	0.209	H4	HA	0.140	C7	C	0.810	H7	HC	0.076
C13	CA	-0.215	C7	CA	0.000	O3	O	-0.792	C5	CT	0.041
H17	HA	0.127	S1	SY	0.806	O1	O	-0.792	H5	HP	0.141
C16	CA	0.302	O2	O	-0.529				N2	N3	-0.422
O4	OS	-0.346	O3	O	-0.529				H3	H	0.336
C17	CT	0.008	N1	NT	-0.153	1cet			H4	H	0.336
H21	H1	0.054	C13	CT	0.013	C1	CT	-0.080	H12	H	0.336
H22	H1	0.054	C14	C	0.574	H1	HC	0.069			
H23	H1	0.054	N2	N	-0.093	H2	HC	0.069	1d3p		
C15	CA	-0.215	O4	OH	-0.682	H3	HC	0.069	C29	CT	-0.029
H20	HA	0.127	H18	H	0.218	C2	CT	-0.038	C30	CT	-0.029
C14	CA	-0.240	O5	O	-0.656	H4	HP	0.098	C27	CT	-0.067
H19	HA	0.209	H19	H2	0.110	H5	HP	0.098	H25	HP	0.108
			C8	CT	-0.146	N1	N3	-0.075	H26	HP	0.108
			H16	H1	0.077	C3	CT	-0.038	H31	HC	0.060
1azm			H17	H1	0.077	C4	CT	-0.080			
C4	CT	-0.258	C9	CT	0.400	H6	HC	0.069	H32	HC	0.060
H1	HC	0.078	C11	CT	-0.228	H7	HC	0.069	H29	HC	0.060
H2	HC	0.078	H10	HC	0.037	H8	HC	0.069	H30	HC	0.060
H3	HC	0.078	H11	HC	0.037	H9	HP	0.098	C28	CT	-0.067
C3	C	0.687	H12	HC	0.037	H10	HP	0.098	H27	HP	0.108
O3	O	-0.554	C12	CT	-0.228	H28	H	0.275	H28	HP	0.108
N4	N	-0.550	H13	HC	0.037	C5	CT	-0.083	N3	N3	0.067
H5	H	0.281	H14	HC	0.037	H11	HP	0.107	H38	H	0.268
C2	CR	0.510	H15	HC	0.037	H12	HP	0.107	C32	CT	-0.192
S2	S	-0.082	C10	CT	-0.146	C6	CT	-0.010	H35	HP	0.134
N2	NB	-0.380	H8	H1	0.077	H13	HC	0.042	H36	HP	0.134
N3	NB	-0.358	H9	H1	0.077	H14	HC	0.042	C15	CT	-0.034
C1	CA	0.289	N3	NT	-0.153	C7	CT	-0.051	H9	H1	0.141
S1	SY	1.017	S2	SY	0.806	H15	HC	0.027	H10	H1	0.141
O1	O	-0.621	O6	O	-0.529	H16	HC	0.027	O1	OS	-0.431
O2	O	-0.621	O7	O	-0.529	C8	CT	0.038	C13	CA	0.650
N1	NT	-0.918	C15	CA	0.000	C9	CT	-0.143	N1	NC	-0.514
H4	H	0.323	C21	CA	-0.103	H17	HC	0.068	C14	CA	0.165
			C20	CA	-0.226	H18	HC	0.068	H8	H4	0.106
			H25	HA	0.141	H19	HC	0.068	C12	CA	-0.413
1bnw			H26	HA	0.140	H20	H1	0.113	H7	HA	0.191
S2	S	-0.036	C16	CA	-0.103	N2	NH	-0.236	C11	CA	-0.009
C1	CA	-0.029	H20	HA	0.140	H21	H	0.273	H6	HA	0.162

# Local Minimum Conformation

C10	CA	0.055	C11	CT	-0.034	1dib			H9	HC	0.117
C7	C*	-0.180	H11	H1	0.060	O1	O	-0.626	H10	HC	0.117
S1	S	-0.090	H12	H1	0.060	C1	C	0.698	C10	CA	-0.045
C3	CB	0.030	C12	CT	-0.055	N1	N	-0.322	C11	CA	-0.256
C2	CA	-0.287	H9	HC	0.033	C2	CA	-0.002	H11	HA	0.145
H1	HA	0.212	H10	HC	0.033	C3	CA	0.251	C16	CA	0.301
C1	CA	0.274	C15	CT	0.066	O2	OH	-0.497	O2	OS	-0.332
O3	OH	-0.560	H17	HC	0.020	H20	HO	0.504	C17	CT	0.007
H37	HO	0.433	C16	CT	-0.104	N2	NA	-0.233	H17	H1	0.071
C6	CA	-0.152	H18	HC	0.049	H1	H	0.327	H18	H1	0.071
H3	HA	0.167	H19	HC	0.049	C4	CA	0.683	H19	H1	0.071
C5	CA	-0.208	C17	CA	0.034	N3	NH	-0.943	C15	CA	-0.225
H2	HA	0.150	C18	CA	-0.143	H2	H	0.449	H16	HA	0.167
C4	CB	0.068	H20	HA	0.127	H3	H	0.449	C14	CA	-0.266
C8	C*	0.013	C19	CA	-0.173	N4	NC	-0.625	H15	HA	0.178
C9	CT	-0.032	H21	HA	0.143	C5	CA	0.468	C12	CA	0.238
H4	HC	0.056	C20	CA	-0.105	N5	NH	-0.385	O1	OS	-0.296
H5	HC	0.056	H22	HA	0.127	H4	H	0.314	C13	CT	-0.104
C17	CA	0.049	C21	CA	-0.173	C6	CT	0.068	H12	H1	0.097
C18	CA	-0.161	H23	HA	0.143	H5	H1	0.064	H13	H1	0.097
C19	CA	-0.149	C22	CA	-0.143	H6	H1	0.064	H14	H1	0.097
H13	HA	0.157	H24	HA	0.127	C7	CT	-0.007			
H12	HA	0.143				H7	H1	0.086			
C16	CA	-0.161				C8	CT	-0.015	1efy		
H11	HA	0.143	1d6v			H8	H1	0.100	C15	CT	-0.037
C21	CA	-0.149	C4	CA	-0.153	H9	H1	0.100	H11	H1	0.085
H14	HA	0.157	H3	HA	0.126	N6	N	-0.188	H12	H1	0.085
C20	CA	0.106	C3	CA	-0.145	C9	CA	-0.003	H13	H1	0.085
O2	OS	-0.325	H2	HA	0.132	C12	CA	-0.143	O2	OS	-0.320
C22	CT	0.020	C1	CA	-0.141	H12	HA	0.114	C12	CA	0.248
H15	H1	0.098	H1	HA	0.125	C13	CA	-0.089	C13	CA	-0.188
H16	H1	0.098	C2	CA	-0.145	H13	HA	0.142	C14	CA	-0.144
C31	CT	-0.087	H5	HA	0.132	C10	CA	-0.143	C11	CA	-0.171
H33	HP	0.125	C6	CA	-0.153	H11	HA	0.114	H5	HA	0.130
H34	HP	0.125	H4	HA	0.126	C11	CA	-0.089	H6	HA	0.159
N2	N3	0.019	C5	CA	-0.006	H10	HA	0.142	H7	HA	0.146
H39	H	0.272	C7	CT	0.014	C14	CA	-0.020	C10	CA	-0.087
C25	CT	-0.056	C12	CT	-0.027	C15	C	0.468	H4	HA	0.094
H21	HP	0.094	C11	CT	-0.057	O3	O	-0.618	C6	CA	-0.097
H22	HP	0.094	H16	HC	0.023	N7	N	-0.216	C2	CR	0.423
C24	CT	-0.021	H17	HC	0.023	H14	H	0.274	N2	NA	-0.390
H19	HC	0.061	H12	HC	0.023	C16	CT	-0.051	H10	H	0.340
H20	HC	0.061	H13	HC	0.023	C17	C	0.844	N1	NB	-0.547
C23	CT	-0.021	H11	HC	0.038	O4	O	-0.826	C1	CB	0.256
H17	HC	0.061	C8	CT	-0.047	O5	O	-0.826	C3	CN	0.120
H18	HC	0.061	H14	HC	0.065	H15	H1	0.051	C4	CA	-0.264
C26	CT	-0.056	H15	HC	0.065	C18	CT	-0.039	H3	HA	0.189
H23	HP	0.094	C9	CT	0.062	H16	HC	0.019	C8	CA	-0.181
H24	HP	0.094	O1	OH	-0.656	H17	HC	0.019	H2	HA	0.162
			H20	HO	0.424	C19	CT	-0.065	C7	CA	-0.140
			H19	H1	0.056	H18	HC	-0.020	H1	HA	0.158
1d4p			C10	CT	-0.020	H19	HC	-0.020	C5	CM	-0.133
C1	CC	-0.278	H18	HC	0.095	C20	C	0.776	C9	C	0.745
H1	HA	0.182	C13	CA	-0.001	O7	O	-0.788	O1	O	-0.606
C2	CA	0.109	C18	CA	-0.167	O6	O	-0.788	N3	N	-0.886
C3	CA	-0.171	C17	CA	-0.112				H8	H	0.383
H2	HA	0.157	H8	HA	0.138				H9	H	0.383
C4	CA	-0.095	H9	HA	0.123	1dlr					
C5	CA	0.695	C14	CA	-0.167	C1	CT	-0.011			
N1	NH	-0.907	H6	HA	0.123	H1	HC	0.044	1ela		
H3	H	0.362	C15	CA	-0.112	H2	HC	0.044	N2	N3	-0.248
H4	H	0.362	H7	HA	0.138	H3	HC	0.044	H11	H	0.277
N2	NK	-0.869	C16	CA	-0.051	C2	CA	-0.003	H12	H	0.277
H5	H	0.373	C19	C	0.536	C3	CA	-0.046	H13	H	0.277
C6	CA	-0.102	O2	O	-0.630	C4	CA	0.497	C8	CT	-0.009
H6	HA	0.131	N1	N	-0.306	N1	NH	-0.696	H9	HP	0.076
C7	CA	-0.276	H10	H	0.248	H4	H	0.384	H10	HP	0.076
H7	HA	0.176	C20	CT	-0.054	H5	H	0.384	C7	CT	-0.033
C8	CA	0.117	H21	H1	0.054	N2	NC	-0.581	H7	HC	0.043
N3	NA	-0.318	H22	H1	0.054	C5	CA	0.698	H8	HC	0.043
H8	H	0.344	C21	CT	0.005	N3	NH	-0.914	C6	CT	-0.016
C9	CC	-0.027	H23	HC	-0.005	H6	H	0.452	H5	HC	0.037
C10	C	0.576	H24	HC	-0.005	H7	H	0.452	H6	HC	0.037
O1	O	-0.574	C22	CT	-0.055	N4	NA	-0.302	C5	CT	-0.075
N4	N	-0.209	H25	HC	-0.012	H20	H	0.323	H3	HC	0.053
C13	CT	-0.034	H26	HC	-0.012	C6	CA	0.343	H4	HC	0.053
H13	H1	0.060	C23	C	0.825	N5	NC	-0.570	C3	CT	0.112
H14	H1	0.060	O4	O	-0.779	C7	CA	0.337	N1	N	-0.296
C14	CT	-0.055	O3	O	-0.779	H8	H4	0.109	C1	C	0.469
H15	HC	0.033				C8	CM	-0.122	O1	O	-0.493
H16	HC	0.033				C9	CT	-0.119	C2	CT	0.354

## Local Minimum Conformation

F1	F	-0.130	H13	H	0.415	S1	SY	0.927	F1	F	-0.206
F2	F	-0.130	H14	H	0.415	O1	O	-0.536	C1	CA	0.146
F3	F	-0.130	N5	NH	-0.892	O2	O	-0.536	C2	CA	-0.184
H1	H	0.225	H15	H	0.415	C1	CA	0.024	H25	HA	0.156
H2	H1	0.076	H16	H	0.415	C2	CA	-0.148	C3	CA	-0.011
C4	C	0.287	H17	H	0.366	H1	HA	0.161	C7	C	0.807
O2	O	-0.531	H18	H1	0.010	C3	CA	-0.195	O3	O	-0.781
N3	N	-0.019	H19	H1	0.010	H2	HA	0.158	O4	O	-0.781
C13	CT	0.016	H20	HC	0.031	C4	CA	0.144	C4	CA	-0.203
C12	CT	-0.056	H21	HC	0.031	C7	CT	-0.198	H24	HA	0.153
C11	CT	-0.081	H22	HC	0.022	H5	HC	0.078	C5	CA	-0.168
H15	HC	0.072	H23	HC	0.022	H6	HC	0.078	H23	HA	0.163
H16	HC	0.072	H24	H1	0.069	H7	HC	0.078	C6	CA	-0.021
H17	HC	0.057	C16	C	0.437	C5	CA	-0.195	N1	N	-0.170
H18	HC	0.057	O3	O	-0.550	H3	HA	0.158	H17	H	0.233
H19	H1	0.049	N6	N	-0.148	C6	CA	-0.148	C23	C	0.435
H20	H1	0.049	C17	CT	-0.282	H4	HA	0.161	O2	O	-0.555
C9	CT	-0.026	C18	C	0.701				C22	CT	0.112
H14	H1	0.090	O4	O	-0.647				O1	OH	-0.643
C10	C	0.454	O5	O	-0.647	1eve			H18	HO	0.423
O3	O	-0.544	H25	H1	0.155	C9	CT	-0.046	H19	H1	0.085
N4	N	-0.408	C19	CT	-0.068	H28	HC	0.041	C9	CA	0.025
H22	H	0.316	H26	HC	0.046	H29	HC	0.041	C10	CA	-0.088
C14	CA	0.083	H27	HC	0.046	C4	CA	-0.101	C11	CA	-0.319
C20	CA	-0.086	C20	CT	0.159	C3	CA	-0.149	H20	HA	0.179
C19	CA	-0.268	C21	CT	-0.225	H22	HA	0.155	H21	HA	0.146
H25	HA	0.169	H28	HC	0.047	C2	CA	0.156	C8	CA	-0.189
H26	HA	0.159	H29	HC	0.047	O3	OS	-0.340	H22	HA	0.139
C16	CA	-0.086	H30	HC	0.047	C24	CT	-0.001	C17	CA	-0.043
H23	HA	0.159	H31	HC	0.040	H17	H1	0.076	C12	CA	0.004
C17	CA	-0.268	C22	CT	-0.135	H18	H1	0.076	C13	CT	0.291
H24	HA	0.169	H32	HC	0.040	H19	H1	0.076	C20	CT	-0.184
C18	CA	0.030	H33	HC	0.040	C1	CA	0.208	H7	HC	0.030
C15	CT	0.247	C23	CT	0.011	O2	OS	-0.229	H8	HC	0.030
C22	CT	-0.244	H34	H1	0.067	C23	CT	-0.087	H9	HC	0.030
H30	HC	0.068	H35	H1	0.067	H14	H1	0.093	C21	CT	-0.184
H31	HC	0.068				H15	H1	0.093	H10	HC	0.030
H32	HC	0.068				H16	H1	0.093	H11	HC	0.030
H21	HC	-0.009	1ett			C6	CA	-0.217	H12	HC	0.030
C21	CT	-0.244	N2	NH	-0.787	H21	HA	0.168	C14	CT	-0.030
H27	HC	0.068	H9	H	0.431	C5	CA	-0.110	H13	HC	0.013
H28	HC	0.068	H10	H	0.431	C7	C	0.514	H14	HC	0.013
H29	HC	0.068	C17	CA	0.668	O1	O	-0.522	C15	CT	-0.127
			N3	NH	-0.787	C8	CT	0.016	H15	HC	0.011
			H11	H	0.431	H20	HC	0.032	H16	HC	0.011
1etr			H12	H	0.431	C10	CT	-0.090	C16	CT	0.286
C1	CT	-0.077	C16	CA	-0.090	H12	HC	0.057	C19	CT	-0.177
H1	HC	0.043	C15	CA	-0.154	H13	HC	0.057	H4	HC	0.038
H2	HC	0.043	C13	CA	-0.086	C11	CT	0.022	H5	HC	0.038
C2	CT	0.220	H17	HA	0.156	C15	CT	0.001	H6	HC	0.038
C3	CT	-0.273	H19	HA	0.153	C14	CT	-0.096	C18	CT	-0.177
H3	HC	0.061	C14	CA	-0.154	H10	HP	0.111	H1	HC	0.038
H4	HC	0.061	H18	HA	0.153	H11	HP	0.111	H2	HC	0.038
H5	HC	0.061	C12	CA	-0.086	H8	HC	0.035	H3	HC	0.038
H6	HC	-0.007	H16	HA	0.156	H9	HC	0.035			
C4	CT	-0.111	C11	CA	0.011	H7	HC	0.026			
H7	H1	0.072	C10	CT	0.020	C12	CT	0.001	1eqz		
H36	H1	0.072	H14	HC	0.043	H5	HC	0.035	C20	CA	-0.005
N1	NH	-0.226	H15	HC	0.043	H6	HC	0.035	H9	HA	0.084
H8	H	0.252	C8	CT	0.011	C13	CT	-0.096	C21	CA	-0.182
C5	CA	0.027	C9	C	0.426	H3	HP	0.111	C26	CM	0.685
C6	CA	-0.003	O3	O	-0.522	H4	HP	0.111	N3	NH	-0.779
C7	CA	-0.143	N4	N	-0.220	N1	N3	-0.017	H14	H	0.427
H9	HA	0.150	C18	CT	-0.016	H30	H	0.259	H15	H	0.427
C8	CA	-0.258	C19	CT	0.042	C16	CT	-0.088	N4	NH	-0.779
H10	HA	0.165	C20	CT	-0.030	H1	HP	0.115	H16	H	0.427
C9	CA	-0.092	C21	CT	0.042	H2	HP	0.115	H17	H	0.427
H11	HA	0.164	C22	CT	-0.016	C17	CA	0.009	C22	CA	-0.106
C10	CA	-0.010	H28	H1	0.054	C18	CA	-0.128	H10	HA	0.143
S1	SY	0.758	H29	H1	0.054	H23	HA	0.133	C23	CA	-0.141
O1	O	-0.497	H26	HC	0.015	C19	CA	-0.160	H11	HA	0.174
O2	O	-0.497	H27	HC	0.015	H24	HA	0.167	C24	CA	-0.095
N2	NT	-0.384	H24	HC	0.017	C20	CA	-0.071	H12	HA	0.173
H12	H	0.228	H25	HC	0.017	H25	HA	0.155	C25	CA	0.004
C11	CT	0.061	H22	HC	0.015	C21	CA	-0.160	C18	CT	-0.019
C12	CT	-0.033	H23	HC	0.015	H26	HA	0.167	H21	HC	0.031
C13	CT	-0.010	H20	H1	0.054	C22	CA	-0.128	H22	HC	0.031
C14	CT	0.313	H21	H1	0.054	H27	HA	0.133	C16	CT	-0.044
N3	NH	-0.704	H13	H1	0.076				C17	C	0.823
C15	CM	0.883	N1	NT	-0.371				O1	OS	-0.420
N4	NH	-0.892	H8	H	0.282	1exa			C27	CT	-0.025

## Local Minimum Conformation

H18	H1	0.096	H2	HA	0.151	C6	CA	-0.074	H16	HC	0.030
H19	H1	0.096	C2	CA	-0.230	H4	HA	0.140	C13	CT	0.028
H20	H1	0.096	H3	HA	0.166	C5	CA	-0.025	C17	C	0.788
O2	O	-0.587	C3	CA	0.153	S1	SY	0.791	O5	O	-0.795
H23	HC	0.013	C4	CA	-0.036	O1	O	-0.563	O6	O	-0.795
C14	CT	0.033	C9	CA	0.644	O2	O	-0.563	H14	H1	0.069
C15	CT	-0.317	N5	NH	-0.906	N1	NT	0.021	N3	N	-0.582
H25	HC	0.111	H16	H	0.375	C8	CT	-0.083	H13	H	0.308
H26	HC	0.111	H17	H	0.375	H8	H1	0.024	C12	C	0.744
H27	HC	0.111	N1	NC	-0.565	H9	H1	0.024	O4	O	-0.650
H24	H1	0.084	C8	CA	0.090	C9	CT	-0.002	C9	CA	-0.086
N1	N	-0.390	H6	H4	0.129	H10	HC	0.026	C10	CA	-0.135
H13	H	0.252	C7	CA	-0.306	H11	HC	0.026	C11	CA	-0.119
C13	C	0.636	H5	HA	0.142	C10	CT	-0.031	H12	HA	0.139
O3	O	-0.559				H12	HC	-0.005	H11	HA	0.152
C8	CA	-0.075				H13	HC	-0.005	C8	CA	-0.135
C9	CA	-0.158	1f0t			C11	CT	0.043	H10	HA	0.152
C10	CA	-0.108	S1	S	-0.053	H14	H1	0.039	C7	CA	-0.119
H5	HA	0.134	C9	CB	-0.014	C12	C	0.763	H9	HA	0.139
H6	HA	0.154	C10	CA	-0.081	O4	O	-0.763	C6	CA	0.010
C7	CA	-0.158	H10	HA	0.206	O3	O	-0.763	S1	SY	0.832
H7	HA	0.154	C11	CA	-0.323				O2	O	-0.523
C12	CA	-0.108	H11	HA	0.173				O3	O	-0.523
H8	HA	0.134	C12	CA	0.335	1f4f			N1	NT	-0.298
C11	CA	0.007	H12	H4	0.085	O8	O	-0.857	C2	CT	-0.003
C2	CA	0.023	N3	NC	-0.592	C16	C	0.823	H3	H1	0.063
C1	CA	-0.133	C13	CB	0.395	O9	O	-0.857	H4	H1	0.063
H4	HA	0.138	C14	C*	-0.018	C15	CT	-0.049	C1	CT	-0.047
C6	CA	-0.062	H13	HA	0.167	H16	HC	-0.015	H1	HC	0.035
C19	CT	0.012	C15	CA	-0.242	H17	HC	-0.015	H2	HC	0.035
N2	N3	-0.353	S2	SY	1.009	C14	CT	0.068	C4	CT	-0.003
H30	H	0.324	O2	O	-0.497	H14	HC	-0.002	H6	HC	0.020
H31	H	0.324	O3	O	-0.497	H15	HC	-0.002	H7	HC	0.020
H32	H	0.324	N5	NT	-0.787	C13	CT	0.033	C3	CT	0.063
H28	HP	0.130	H19	H	0.457	C17	C	0.774	H5	H1	0.030
H29	HP	0.130	C17	CT	0.211	O6	O	-0.793	C5	C	0.598
C5	CA	-0.136	C18	CT	-0.138	O7	O	-0.793	O1	O	-0.603
H1	HA	0.161	C19	CT	-0.022	H13	H1	0.047	N2	N	-0.494
C4	CA	-0.189	H17	H1	0.078	N2	N	-0.485	H8	H	0.290
H2	HA	0.186	H18	H1	0.078	H12	H	0.268	C18	CT	0.096
C3	CA	-0.051	H15	HC	0.085	C12	C	0.572	H19	H1	0.041
H3	HA	0.143	H16	HC	0.085	O5	O	-0.623	H20	H1	0.041
			H14	H1	0.128	C9	CA	0.008	C19	CT	-0.043
			C16	C	0.507	C10	CA	-0.160	H21	HC	-0.018
1f0r			O4	O	-0.539	C11	CA	-0.094	H22	HC	-0.018
S1	S	-0.051	N4	N	-0.253	H11	HA	0.149	C20	C	0.821
C10	CB	-0.071	C8	CT	-0.136	H10	HA	0.146	O10	O	-0.828
C11	CA	-0.054	H7	H1	0.145	C8	CA	-0.160	O9	O	-0.828
H7	HA	0.196	H8	H1	0.145	H9	HA	0.146			
C12	CA	-0.334	C4	CA	0.019	C7	CA	-0.094	1fcx		
H8	HA	0.161	C5	CA	-0.140	H8	HA	0.149	C16	CT	-0.197
C13	CA	0.341	H3	HA	0.198	C6	CA	0.057	H14	HC	0.035
H9	H4	0.066	C3	CA	0.327	S1	SY	0.568	H15	HC	0.035
N2	NC	-0.592	O1	OH	-0.566	O3	O	-0.505	H16	HC	0.035
C14	CB	0.430	H9	HO	0.460	O4	O	-0.505	C12	CT	0.310
C15	C*	-0.110	C2	CA	-0.268	N1	NT	-0.245	C17	CT	-0.197
H10	HA	0.166	H2	HA	0.178	C2	CT	-0.114	H17	HC	0.035
C16	CA	-0.132	C1	CA	-0.100	H3	H1	0.103	H18	HC	0.035
S2	SY	1.059	H1	HA	0.159	H4	H1	0.103	H19	HC	0.035
O1	O	-0.526	C6	CA	-0.200	C1	CT	-0.037	C11	CT	-0.054
O2	O	-0.526	C7	CM	0.756	H1	HC	0.027	H6	HC	0.014
N4	NT	-0.673	N2	NH	-0.821	H2	HC	0.027	H7	HC	0.014
H1	H	0.373	H6	H	0.430	C4	CT	0.078	C10	CT	-0.085
C18	CT	0.126	H20	H	0.430	H6	HC	-0.025	H4	HC	0.008
C19	CT	-0.076	N1	NH	-0.821	H7	HC	-0.025	H5	HC	0.008
C20	CT	-0.171	H4	H	0.430	C3	CT	0.054	C9	CT	0.278
H14	H1	0.094	H5	H	0.430	H5	H1	0.057	C14	CT	-0.192
H15	H1	0.094				C5	C	0.768	H8	HC	0.038
H12	HC	0.091				O2	O	-0.785	H9	HC	0.038
H13	HC	0.091	1f4e			O1	O	-0.785	H10	HC	0.038
H11	H1	0.114	C4	CA	-0.074				C15	CT	-0.192
C17	C	0.420	H3	HA	0.140				H11	HC	0.038
O3	O	-0.538	C3	CA	-0.269	1f4g			H12	HC	0.038
N3	N	-0.088	H2	HA	0.151	O7	O	-0.843	H13	HC	0.038
C21	CT	-0.040	C2	CA	0.163	C16	C	0.821	C8	CA	-0.036
H18	H1	0.077	C7	CT	-0.126	O8	O	-0.843	C23	CA	-0.231
H19	H1	0.077	H5	HC	0.038	C15	CT	-0.070	H23	HA	0.141
C6	CA	0.083	H6	HC	0.038	H17	HC	-0.015	C13	CA	-0.011
C5	CA	-0.243	H7	HC	0.038	H18	HC	-0.015	C24	CA	-0.297
H4	HA	0.168	C1	CA	-0.269	C14	CT	-0.030	H24	HA	0.178
C1	CA	-0.184	H1	HA	0.151	H15	HC	0.030			

## Local Minimum Conformation

C25	CA	-0.078		H12	HC	0.027		C11	CT	0.252	
H25	HA	0.132		C15	CT	-0.005		H9	H1	0.007	
C22	CA	0.002	1fjs	H13	HC	0.034		H10	H1	0.007	
C26	CT	0.172	O1	OH	-0.574	H14	HC	0.034	C12	CT	-0.229
O3	OH	-0.669	H24	HO	0.454	C14	CT	0.058	H11	H1	0.143
H27	HO	0.423	C1	CA	0.339	C23	CA	0.034	H12	H1	0.143
H26	H1	0.062	C2	CA	-0.259	C24	CA	-0.096	N2	NH	-0.171
C19	CA	0.059	H1	HA	0.162	C25	CA	-0.175	C13	CT	-0.128
C18	CA	-0.136	C3	CA	-0.151	C26	CA	-0.113	H13	H1	0.113
H20	HA	0.142	H2	HA	0.148	C27	CA	-0.175	H14	H1	0.113
C5	CA	0.027	C4	CA	-0.192	C28	CA	-0.096	H15	H1	0.113
C4	CA	-0.272	C5	CM	0.772	H6	HA	0.112	C14	CA	0.272
H2	HA	0.129	N1	NH	-0.833	H7	HA	0.146	N3	NA	-0.095
C3	CA	-0.093	H3	H	0.405	H8	HA	0.134	H20	H	0.318
H1	HA	0.125	H4	H	0.405	H9	HA	0.146	C15	CA	-0.157
C2	CA	0.002	N2	NH	-0.833	H10	HA	0.112	H16	H4	0.225
C1	C	0.783	H5	H	0.405	H15	H1	0.106	C16	CA	-0.114
O1	O	-0.777	H6	H	0.405	O1	OS	-0.383	H17	HA	0.180
O2	O	-0.777	C6	CA	-0.091	C1	C	0.728	C17	CA	-0.045
C7	CA	-0.229	H7	HA	0.197	O2	O	-0.557	H18	HA	0.196
H3	HA	0.135	C7	CA	0.118	C2	CT	-0.019	C18	CA	-0.170
C6	CA	0.124	O2	OS	-0.258	H16	H1	0.074	H19	HA	0.153
C21	CA	-0.199	C8	CA	0.300	C3	CT	-0.035			
H22	HA	0.149	C9	CA	0.194	H17	HC	0.028			
C20	CA	-0.264	F1	F	-0.197	H18	HC	0.028	1fm9		
H21	HA	0.134	C10	CA	0.068	C4	CT	-0.032	C30	CA	-0.145
			N4	NH	-0.192	H19	HC	0.018	C31	CA	-0.083
			C11	CT	-0.216	H20	HC	0.018	H25	HA	0.110
1fcz			C12	C	0.866	C5	CT	0.014	H24	HA	0.138
C1	CA	-0.156	O3	O	-0.721	H21	HC	0.019	C29	CA	-0.161
H1	HA	0.118	O4	O	-0.721	H22	HC	0.019	H23	HA	0.142
C2	CA	-0.178	H8	H1	0.104	C6	CT	-0.055	C28	CA	-0.145
H2	HA	0.139	H9	H1	0.104	H23	H1	0.054	H22	HA	0.138
C3	CA	0.042	C13	CT	-0.216	H24	H1	0.054	C27	CA	-0.083
C4	C	0.792	H10	H1	0.106	N1	N	-0.105	H21	HA	0.110
O1	O	-0.777	H11	H1	0.106	C7	C	0.316	C26	CA	-0.060
O2	O	-0.777	H12	H1	0.106	O3	O	-0.499	C22	CC	0.522
C5	CA	-0.178	C14	CA	0.070	C8	C	0.532	N2	NB	-0.570
H3	HA	0.139	F2	F	-0.151	O4	O	-0.510	O3	OS	-0.276
C6	CA	-0.156	N3	NC	-0.437	C9	CT	0.209	C24	CA	0.110
H4	HA	0.118	C15	CA	0.373	C12	CT	-0.159	C25	CT	-0.212
C7	CA	0.018	O5	OS	-0.323	H25	HC	0.033	H18	HC	0.082
C8	CM	-0.040	C16	CA	0.187	H26	HC	0.033	H19	HC	0.082
H24	HA	0.102	C18	CA	-0.151	H27	HC	0.033	H20	HC	0.082
C9	CM	-0.362	H14	HA	0.148	C13	CT	-0.159	C23	CC	0.150
H25	HA	0.171	C19	CA	-0.155	H28	HC	0.033	C33	CT	0.028
C10	C	0.605	H15	HA	0.146	H29	HC	0.033	H28	HC	0.005
O3	O	-0.572	C20	CA	-0.110	H30	HC	0.033	H29	HC	0.005
C11	CA	-0.030	H16	HA	0.134	C10	CT	-0.051	C32	CT	0.070
C12	CA	-0.263	C17	CA	0.005	H31	HC	0.023	H26	H1	0.058
H5	HA	0.192	H13	HA	0.072	H32	HC	0.023	H27	H1	0.058
C13	CA	-0.006	C21	CA	-0.253	C11	CT	-0.084	O1	OS	-0.219
C14	CT	0.297	C22	CM	0.722	H33	HC	0.017	C8	CA	0.071
C15	CT	-0.210	N5	NH	-0.359	H34	HC	0.017	C7	CA	-0.149
H6	HC	0.042	C23	CT	0.016	H35	HC	0.017	C5	CA	-0.130
H7	HC	0.042	H17	H1	0.044				H6	HA	0.115
H8	HC	0.042	H18	H1	0.044				H8	HA	0.106
C16	CT	-0.210	H19	H1	0.044	1fm6			C6	CA	-0.149
H9	HC	0.042	C24	CT	0.019	O1	O	-0.522	H7	HA	0.106
H10	HC	0.042	H20	H1	0.042	C1	C	0.590	C4	CA	-0.130
H11	HC	0.042	H21	H1	0.042	N1	N	-0.477	H5	HA	0.115
C17	CT	-0.087	C25	CT	0.048	H1	H	0.359	C3	CA	-0.045
H12	HC	0.015	H22	H1	0.068	C2	C	0.538	C2	CT	-0.023
H13	HC	0.015	H23	H1	0.068	O2	O	-0.448	H3	HC	0.029
C18	CT	-0.066	N6	N2	-0.659	S1	S	-0.190	H4	HC	0.029
H14	HC	0.016				C3	CT	-0.015	C1	CT	0.285
H15	HC	0.016				H2	H1	0.097	C34	C	0.601
C19	CT	0.262	1fkg			C4	CT	-0.070	O4	O	-0.715
C20	CT	-0.212	C21	CA	-0.183	H3	HC	0.081	O5	O	-0.715
H16	HC	0.044	C22	CA	-0.134	H4	HC	0.081	H2	H1	-0.008
H17	HC	0.044	H1	HA	0.133	C5	CA	-0.027	N1	NH	-0.616
H18	HC	0.044	H2	HA	0.145	C8	CA	-0.111	H1	H	0.366
C21	CT	-0.212	C20	CA	-0.100	H7	HA	0.142	C9	CA	0.105
H19	HC	0.044	H3	HA	0.129	C9	CA	-0.157	C14	CA	-0.062
H20	HC	0.044	C19	CA	-0.183	H8	HA	0.124	C13	CA	-0.183
H21	HC	0.044	H4	HA	0.145	C6	CA	-0.111	C12	CA	-0.197
C22	CA	0.001	C18	CA	-0.134	H6	HA	0.142	C11	CA	-0.272
C23	CA	-0.266	H5	HA	0.133	C7	CA	-0.157	H9	HA	0.192
H22	HA	0.174	C17	CA	0.010	H5	HA	0.124	H10	HA	0.128
C24	CA	-0.104	C16	CT	-0.025	C10	CA	0.108	H11	HA	0.139
H23	HA	0.118	H11	HC	0.027	O3	OS	-0.225	H12	HA	0.113

# Local Minimum Conformation

C10	CA	0.120	H8	H1	0.052				H15	HC	0.020
C21	C	0.382	C9	CA	0.019				H16	HC	0.020
O2	O	-0.550	C10	CA	-0.101	1h1p			C16	CT	0.007
C15	CA	0.014	H9	HA	0.132	N1	NA	-0.382	H17	HC	0.016
C16	CA	-0.122	C11	CA	-0.217	H1	H	0.370	H18	HC	0.016
H13	HA	0.147	H10	HA	0.144	C1	CR	0.238	C17	CT	-0.020
C17	CA	-0.177	C12	CA	-0.080	H2	H5	0.184	C19	HC	0.020
H14	HA	0.140	H11	HA	0.119	N2	NB	-0.536	H20	HC	0.020
C18	CA	-0.108	C13	CA	-0.217	C2	CB	0.208	C18	CT	-0.038
H15	HA	0.119	H12	HA	0.144	C3	CB	0.397	H21	HC	0.021
C19	CA	-0.177	C14	CA	-0.101	N3	NC	-0.523	H22	HC	0.021
H16	HA	0.140	H13	HA	0.132	C4	CA	0.543			
C20	CA	-0.122				N4	NH	-0.850			
H17	HA	0.147				H3	H	0.441			
						H4	H	0.441	1h9u		
						N5	NA	-0.208	O1	O	-0.759
						H18	H	0.284	C17	C	0.720
1frb						C5	CM	0.254	O2	O	-0.759
O2	O	-0.787	C1	C	0.740	O1	OS	-0.186	C14	CA	-0.029
C18	C	0.807	O2	O	-0.777	C6	CT	-0.030	C15	CA	-0.093
O3	O	-0.787	C2	CT	0.570	H5	H1	0.096	C16	CA	-0.364
C17	CT	-0.089	H12	HC	0.012	H6	H1	0.096	H9	HA	0.175
H10	HC	0.007	H13	HC	0.012	C7	CT	0.004	H8	HA	0.133
H11	HC	0.007	H14	HC	0.012	H7	HC	0.062	C13	CA	0.145
C4	CA	0.354	C4	CT	-0.185	C8	CT	-0.032	H7	H4	0.076
N2	NC	-0.598	H15	HC	0.012	H8	HC	0.019	N1	NC	-0.506
C3	CA	0.027	H16	HC	0.012	H9	HC	0.019	C12	CA	0.402
C8	CA	-0.130	H17	HC	0.012	C9	CT	-0.012	C11	CX	0.028
C7	CA	-0.131	O3	OS	-0.484	H10	HC	0.018	C18	CX	-0.238
C6	CA	-0.177	C5	CA	0.237	H11	HC	0.018	C19	CX	-0.238
C5	CA	-0.132	C10	CA	-0.125	C10	CT	0.006	H12	HC	0.093
H1	HA	0.141	C9	CA	-0.220	H12	HC	0.015	H13	HC	0.093
H2	HA	0.136	H10	HA	0.131	H13	HC	0.015	H10	HC	0.093
H3	HA	0.140	H9	HA	0.113	C11	CT	-0.012	H11	HC	0.093
H4	HA	0.151	C6	CA	-0.125	H14	HC	0.018	C3	CA	0.000
C2	CA	0.016	H8	HA	0.113	H15	HC	0.018	C4	CA	0.048
C1	C	0.336	C7	CA	-0.220	C12	CT	-0.032	C5	CA	-0.305
O1	O	-0.566	H7	HA	0.131	H16	HC	0.019	H2	HA	0.194
N1	N	0.295	C8	CA	0.021	H17	HC	0.019	C24	CT	-0.091
C9	CT	-0.169	C11	CT	-0.024				H26	HC	0.038
H5	H1	0.130	H18	HC	0.020				H27	HC	0.038
H6	H1	0.130	H19	HC	0.020	1h1s			H28	HC	0.038
C10	CA	0.371	C12	CT	-0.014	C1	CM	-0.124	C2	CA	-0.229
S1	S	-0.124	H20	HC	0.026	H1	HA	0.144	H1	HA	0.175
N3	NB	-0.555	H21	HC	0.026	C2	CA	-0.127	C1	CA	-0.062
C12	CB	0.297	C13	CT	-0.103	H2	HA	0.189	C6	CA	-0.058
C16	CA	-0.136	H22	H1	0.067	C3	CA	-0.020	C7	CT	0.298
H9	HA	0.146	H23	H1	0.067	S1	SY	1.146	C20	CT	-0.151
C11	CB	0.046	N1	N	-0.130	N1	NT	-1.045	H14	HC	0.018
C13	CA	-0.194	C15	C	0.458	N3	NA	-0.459	H15	HC	0.018
H7	HA	0.211	O4	O	-0.499	H3	H	0.474	H16	HC	0.018
C14	CA	-0.264	N2	N	-0.248	H4	H	0.474			
H8	HA	0.178	C16	CA	0.128	O1	O	-0.544	C21	CT	-0.151
C15	CA	-0.024	C17	CA	-0.136	O2	O	-0.544	H17	HC	0.018
C19	CT	0.488	C18	CA	-0.215	C4	CA	-0.127	H18	HC	0.018
F2	F	-0.184	C19	CA	-0.059	H5	HA	0.189	H19	HC	0.018
F3	F	-0.184	C20	CA	-0.014	C5	CM	-0.124	C8	CT	-0.013
F1	F	-0.184	C11	CI	-0.101	H6	HA	0.144	H3	HC	-0.005
			C21	CA	0.031	C6	CM	0.076	H4	HC	-0.005
			C12	CI	-0.086	N2	NH	-0.234	C9	CT	-0.036
1g4o			H1	HA	0.121	H7	H	0.320	H5	HC	-0.020
C1	CA	-0.153	H2	HA	0.171	C7	CA	0.261	H6	HC	-0.020
H1	HA	0.117	H3	HA	0.161	N6	NA	-0.030	C10	CT	0.331
C2	CA	-0.090	H11	H	0.175	H23	H	0.182	C23	CT	-0.138
H2	HA	0.128	C14	CT	-0.054	N3	NC	-0.571	H23	HC	0.015
C3	CA	-0.028	H24	H1	0.083	C8	CB	0.492	H24	HC	0.015
S1	SY	1.140	H25	H1	0.083	N5	NA	-0.459	H25	HC	0.015
N1	NT	-0.995	C22	CT	0.028	C10	CR	0.263	C22	CT	-0.138
H3	H	0.328	H26	HC	0.031	N4	NB	-0.558	H20	HC	0.015
O1	O	-0.662	H27	HC	0.031	H9	H5	0.179	H21	HC	0.015
O2	O	-0.662	C23	CA	0.023	H8	H	0.392	H22	HC	0.015
C4	CA	-0.090	C24	CA	-0.057	C9	CB	0.240			
H4	HA	0.128	C13	CI	-0.104	C11	CM	0.185			
C5	CA	-0.153	C25	CA	-0.077	O3	OS	-0.172	1hdq		
H5	HA	0.117	H6	HA	0.130	C12	CT	-0.024	O1	OH	-0.723
C6	CA	-0.137	C26	CA	-0.212	H10	H1	0.096	N1	N	-0.443
C7	C	0.670	H5	HA	0.174	H11	H1	0.096	H1	H	0.299
O3	O	-0.558	C27	CA	-0.151	C13	CT	0.007	C1	C	0.549
N2	N	-0.521	H4	HA	0.169	H12	HC	0.064	O2	O	-0.762
H6	H	0.299	C28	CA	0.171	C14	CT	-0.038	N2	N	-0.212
C8	CT	0.044	F1	F	-0.146	H13	HC	0.021	H2	H	0.244
H7	H1	0.052				H14	HC	0.021	C2	CT	0.052
						C15	CT	-0.020	C3	C	0.764

## Local Minimum Conformation

O3	O	-0.797	H35	H	0.395	C11	CT	-0.076	H11	HP	0.165	
O4	O	-0.797	C4	CA	-0.218	O4	OH	-0.629	H12	HP	0.165	
H3	H1	0.009	H3	HA	0.162	H24	HO	0.435	H22	H	0.291	
C4	CT	-0.048	C5	CA	-0.173	H22	H1	0.095	C5	CT	-0.067	
H4	HC	0.017	H4	HA	0.171	H23	H1	0.095	H7	HC	0.069	
H5	HC	0.017	C6	CA	0.036	H21	H1	0.109	H8	HC	0.069	
C5	CA	-0.020	S1	SY	0.775	N2	N	-0.061	C6	CT	-0.053	
C6	CA	-0.097	O1	O	-0.492	H16	H	0.183	H5	HC	0.067	
H6	HA	0.147	O2	O	-0.492	C8	C	0.251	H6	HC	0.067	
C7	CA	-0.216	N2	NT	-0.225	O1	O	-0.496	C8	CT	-0.008	
H7	HA	0.114	C7	CT	-0.093	C2	CT	0.012	H13	HP	0.105	
C8	CA	-0.139	C8	CT	0.186	N1	NT	-0.587	C9	CT	-0.071	
H8	HA	0.094	C9	CT	-0.197	H32	H	0.373	H14	HC	0.067	
C9	CA	-0.216	H5	HC	0.044	H31	H1	0.176	H15	HC	0.067	
H9	HA	0.114	H6	HC	0.044	C1	CT	0.239	C10	CT	0.175	
C10	CA	-0.097	H7	HC	0.044	C6	CT	-0.179	H16	H1	0.127	
H10	HA	0.147	C10	CT	-0.197	H28	HC	0.052	O3	OS	-0.461	
				H8	HC	0.044	H29	HC	0.052	C11	C	0.687
				H9	HC	0.044	H30	HC	0.052	O4	O	-0.540
1hfc				H10	HC	0.044	C7	CT	-0.179	C12	CA	-0.048
O1	OH	-0.647	H11	HC	0.021	H25	HC	0.052	C13	CA	-0.121	
N1	N	-0.253	H12	H1	0.093	H26	HC	0.052	H17	HA	0.151	
H1	H	0.286	H13	H1	0.093	H27	HC	0.052	C14	CA	-0.150	
C1	C	0.527	C11	CT	-0.034	S1	S	-0.274	H18	HA	0.152	
O2	O	-0.668	H14	H1	0.103	C3	CT	0.031	C15	CA	-0.083	
C2	CT	-0.111	H15	H1	0.103	H33	H2	0.167	H19	HA	0.151	
H2	HC	0.008	C12	CT	0.050	C4	CT	-0.006	C16	CA	-0.150	
H3	HC	0.008	O3	OH	-0.643	N3	N	-0.325	H20	HA	0.152	
C3	CT	0.097	H16	HO	0.410	C12	C	0.530	C17	CA	-0.121	
C4	CT	-0.171	H17	H1	0.117	C13	CT	-0.230	H21	HA	0.151	
C5	CT	0.102	C13	CT	0.116	C15	CA	0.023				
C6	CT	-0.159	C14	CT	-0.005	C14	CA	-0.122				
H4	HC	0.029	C15	CA	-0.048	C19	CA	-0.172	1i8z			
H5	HC	0.029	C16	CA	-0.103	C18	CA	-0.107	C1	CT	-0.105	
H6	HC	0.029	C17	CA	-0.164	C17	CA	-0.172	H1	HP	0.122	
C7	CT	-0.159	C18	CA	-0.127	C16	CA	-0.122	H2	HP	0.122	
H7	HC	0.029	C19	CA	-0.164	H10	HA	0.133	C2	CT	0.167	
H8	HC	0.029	C20	CA	-0.103	H9	HA	0.145	H3	H1	0.064	
H9	HC	0.029	H18	HA	0.123	H8	HA	0.129	H4	H1	0.064	
H10	HC	0.056	H19	HA	0.139	H7	HA	0.145	O1	OS	-0.399	
H11	HC	0.056	H20	HA	0.131	H6	HA	0.133	C3	CT	0.167	
H12	HC	0.056	H21	HA	0.139	H35	HC	0.108	H5	H1	0.064	
H13	HC	0.050	H22	HA	0.123	H36	HC	0.108	H6	H1	0.064	
C8	C	0.308	H23	HC	0.047	O3	O	-0.550	C4	CT	-0.105	
O3	O	-0.532	H24	HC	0.047	H17	H	0.247	H7	HP	0.122	
N2	N	-0.247	H25	H1	0.112	H34	H1	0.085	H8	HP	0.122	
H14	H	0.213	N3	N	-0.501	C5	C	0.370	N1	N3	-0.042	
C9	CT	0.108	H26	H	0.229	O2	O	-0.464	H21	H	0.213	
C10	C	0.331	C21	C	0.807	N4	N	-0.338	C5	CT	-0.073	
N3	N	-0.338	O4	O	-0.633	H18	H	0.294	H9	HP	0.122	
C11	CT	-0.146	O5	OS	-0.372	C10	CT	-0.049	H10	HP	0.122	
H15	H1	0.081	C22	CT	0.138	H37	H1	0.088	C6	CA	-0.158	
H16	H1	0.081	H27	H1	0.075	H38	H1	0.088	C7	CA	-0.021	
H17	H1	0.081	C23	CT	0.125	C31	CA	0.030	H11	HA	0.160	
H18	H	0.266	H28	H1	0.049	C30	CA	-0.113	C8	CB	0.002	
O4	O	-0.514	H29	H1	0.049	H15	HA	0.130	C9	C*	-0.148	
H19	H1	0.054	O6	OS	-0.453	C29	CA	-0.189	H12	HA	0.158	
C12	CT	0.080	C24	CT	0.204	H14	HA	0.144	C10	CA	-0.114	
H20	HC	0.030	H30	H1	0.022	C28	CA	-0.105	S1	SY	1.134	
H21	HC	0.030	H31	H1	0.022	H13	HA	0.128	O2	O	-0.621	
C13	CA	-0.090	C25	CT	-0.121	C27	CA	-0.189	O3	O	-0.621	
C14	CA	-0.056	H32	HC	0.061	H12	HA	0.144	N2	NT	-0.920	
H22	HA	0.125	H33	HC	0.061	C32	CA	-0.113	H13	H	0.341	
C15	CA	-0.210				H11	HA	0.130	S2	S	0.146	
H23	HA	0.128							C11	CB	-0.106	
C16	CA	-0.138	1htf						S3	SY	0.865	
H24	HA	0.117	C23	CA	-0.100	1i7z			O4	O	-0.480	
C17	CA	-0.210	H1	HA	0.124	C1	CT	-0.033	O5	O	-0.480	
H25	HA	0.128	C22	CA	-0.191	H1	H1	0.105	N3	NH	-0.078	
C18	CA	-0.056	H2	HA	0.145	H2	H1	0.105	C12	CA	-0.029	
H26	HA	0.125	C21	CA	-0.105	H3	H1	0.105	C13	CA	-0.063	
			H3	HA	0.131	O1	OS	-0.369	H14	HA	0.100	
			C26	CA	-0.191	C2	C	0.726	C14	CA	0.183	
1hpv			H4	HA	0.145	O2	O	-0.575	O6	OS	-0.308	
C2	CA	-0.173	C25	CA	-0.100	C3	CT	-0.040	C15	CT	-0.015	
H1	HA	0.171	H5	HA	0.124	H4	HC	0.068	H15	H1	0.080	
C1	CA	-0.218	C24	CA	0.003	C4	CT	-0.017	H16	H1	0.080	
H2	HA	0.162	C20	CT	-0.042	H9	HP	0.103	H17	H1	0.080	
C3	CA	0.340	H19	HC	0.056	N1	N3	-0.014	C16	CA	-0.144	
N1	NH	-0.911	H20	HC	0.056	C7	CT	-0.333	H18	HA	0.148	
H34	H	0.395	C9	CT	-0.013	H10	HP	0.165	C17	CA	-0.202	

# Local Minimum Conformation

H19	HA	0.179		N4	NT	-0.593		H27	HC	0.017
C18	CA	-0.100		H23	H	0.382		C21	CT	-0.014
H20	HA	0.141		S1	SY	0.855		H28	HC	0.019
			1jsv	O4	O	-0.518		H29	HC	0.019
				O5	O	-0.518		C22	CT	-0.040
1if7				C18	CA	-0.006		H30	HC	0.020
O1	O	-0.667		C23	CA	-0.064		H31	HC	0.020
S1	SY	1.114								
O2	O	-0.667								
N1	NT	-0.939								
H1	H	0.305								
C1	CA	-0.020								
C4	CA	-0.077								
H4	HA	0.118								
C5	CA	-0.156								
H5	HA	0.125								
C2	CA	-0.077								
H3	HA	0.118								
C3	CA	-0.156								
H2	HA	0.125								
C6	CA	-0.163								
C7	C	0.735								
O3	O	-0.579								
N2	N	-0.638								
H6	H	0.312								
C8	CT	0.029								
H7	H1	0.048								
H8	H1	0.048								
C9	CT	0.271								
C10	CT	-0.070								
H9	HC	0.002								
H10	HC	0.002								
H11	HC	0.002								
H12	HC	0.004								
C11	CT	-0.156	1k1j							
H13	H1	0.057	C17	CT	0.029					
H14	H1	0.057	H20	H1	0.078					
N3	NA	0.051	H21	H1	0.078					
C12	CA	-0.191	H22	H1	0.078					
H15	H4	0.187	O3	OS	-0.400					
C13	C*	-0.337	C16	C	0.709					
H16	HA	0.179	O2	O	-0.564					
C14	CB	0.083	C15	CT	0.006					
C15	CB	0.065	C13	CT	-0.015					
C16	CA	-0.192	C14	CT	0.111					
H17	HA	0.146	H17	H1	0.030					
C17	CA	-0.135	H18	H1	0.030					
H18	HA	0.143	H15	HC	0.010					
C18	CA	-0.230	H16	HC	0.010					
H19	HA	0.146	H19	HC	0.010					
C19	CA	-0.169	C12	CT	-0.015					
H20	HA	0.145	H13	HC	0.010					
			H14	HC	0.010					
			C11	CT	0.111					
1ly7			H11	H1	0.030					
N1	NT	-1.017	H12	H1	0.030					
H1	H	0.328	N3	N	-0.317					
S1	S6	1.230	C10	C	0.507					
O1	O	-0.710	O1	O	-0.548					
O2	O	-0.710	C9	CT	0.053					
N2	NT	-0.686	C8	CT	-0.116					
H2	H	0.344	C1	CA	0.027					
C1	CT	0.196	C2	CA	-0.081					
C2	C	0.721	C6	CA	-0.150					
O3	O	-0.778	C5	CA	-0.092					
O4	O	-0.778	C4	CA	-0.173					
H3	H1	0.039	C3	CA	-0.067					
C3	CT	-0.059	H2	HA	0.138					
H4	HC	0.027	H3	HA	0.177					
H5	HC	0.027	H4	HA	0.132					
C4	CA	0.006	C7	CA	0.669					
C5	CA	-0.097	N1	NH	-0.733					
H6	HA	0.133	H5	H	0.405					
C6	CA	-0.199	H6	H	0.405					
H7	HA	0.109	N2	NH	-0.733					
C7	CA	-0.173	H7	H	0.405					
H8	HA	0.101	H31	H	0.405					
C8	CA	-0.199	H1	HA	0.122					
H9	HA	0.109	H8	HC	0.085					
C9	CA	-0.097	H9	HC	0.085					
H10	HA	0.133	H10	H1	0.186					
			H26	HC	0.017					
								1kv1		

## Local Minimum Conformation

C11	CI	-0.127	N2	N	-0.511	S1	SY	1.115	C20	CA	-0.166
C5	CA	0.009	H19	H	0.348	O1	O	-0.578	H16	HA	0.132
C6	CA	-0.091	C17	C	0.727	O2	O	-0.578	C21	CA	0.033
C7	CM	-0.152	O3	O	-0.525	N1	NB	-0.609	C26	CT	-0.145
H3	HA	0.145	N3	N	-0.424	C7	CV	0.606	H4	HC	0.063
H4	HA	0.142	H20	H	0.230	O3	OS	-0.228	H5	HC	0.063
C4	CA	-0.091	C18	CR	0.153	C8	CT	-0.026	H6	HC	0.063
H1	HA	0.142	C19	C*	-0.413	H5	H1	0.096	C22	CA	-0.174
C3	CM	-0.152	H21	HA	0.197	H6	H1	0.096	H15	HA	0.156
H2	HA	0.145	C20	CV	0.170	C9	CT	0.202	C23	CA	0.033
C2	CA	0.115	C21	CT	0.503	H7	H1	0.057	C27	CT	-0.145
N1	N	-0.523	C22	CT	-0.274	C15	CA	-0.102	H7	HC	0.063
H5	H	0.290	H22	HC	0.053	S2	S	-0.206	H8	HC	0.063
C1	C	0.808	H23	HC	0.053	O4	OS	-0.423	H9	HC	0.063
O1	O	-0.491	H24	HC	0.053	C10	CT	0.055	C24	CA	-0.166
N2	N	-0.602	C23	CT	-0.274	H8	H1	0.026	H17	HA	0.132
H6	H	0.355	H25	HC	0.053	H9	H1	0.026			
C8	CR	0.184	H26	HC	0.053	C11	CT	0.081			
C9	C*	-0.392	H27	HC	0.053	H10	HC	0.028	1m48		
H7	HA	0.177	C24	CT	-0.274	H11	HC	0.028	C2	CT	-0.064
C10	CV	0.149	H28	HC	0.053	C12	C*	0.027	H4	H1	0.069
C15	CT	0.531	H29	HC	0.053	C13	C*	-0.179	H5	H1	0.069
C12	CT	-0.199	H30	HC	0.053	C14	C	0.790	N3	NH	-0.204
H14	HC	0.027	N4	NB	-0.480	O5	O	-0.771	C1	C2	0.462
H15	HC	0.027	N5	N*	0.206	O6	O	-0.771	N1	NH	-0.616
H16	HC	0.027	C25	CA	0.049	C16	CC	0.064	H1	H	0.350
C13	CT	-0.199	C26	CM	-0.131	N2	N	-0.203	H31	H	0.350
H11	HC	0.027	H31	HA	0.141	H12	H	0.267	N2	NH	-0.616
H12	HC	0.027	C27	CA	-0.193	C17	C	0.463	H2	H	0.350
H13	HC	0.027	H32	HA	0.154	O7	O	-0.553	H3	H	0.350
C14	CT	-0.199	C28	CA	0.085	C18	C	0.697	C3	CT	0.003
H8	HC	0.027	C29	CT	-0.157	O9	O	-0.754	H6	H1	0.077
H9	HC	0.027	H33	HC	0.064	O8	O	-0.754	H7	H1	0.077
H10	HC	0.027	H34	HC	0.064				C4	CT	0.003
N3	NB	-0.543	H35	HC	0.064				H8	HC	0.029
N4	N*	0.217	C30	CA	-0.193	1lqd			H9	HC	0.029
C11	CT	-0.121	H36	HA	0.154	N3	NH	-0.751	C5	CT	0.003
H17	H1	0.077	C31	CM	-0.131	H26	H	0.412	H10	HC	0.019
H18	H1	0.077	H37	HA	0.141	H27	H	0.412	H11	HC	0.019
H19	H1	0.077				C25	CA	0.676	C6	CT	0.078
						N4	NH	-0.751	H12	HC	0.057
						H28	H	0.412	C7	CT	-0.111
						1l2s					
1kv2			C11	CI	-0.165	H29	H	0.412	H13	HC	0.063
C2	CT	-0.094	C6	CA	0.010	C18	CA	-0.178	H14	HC	0.063
H1	HP	0.127	C5	CA	-0.149	C19	CA	-0.068	C8	C	0.458
H2	HP	0.127	C3	CA	-0.128	H21	HA	0.142	O1	O	-0.522
C1	CT	0.136	H3	HA	0.152	C17	CA	-0.067	N4	N	-0.390
H3	H1	0.071	H5	HA	0.148	H20	HA	0.131	H15	H	0.271
H4	H1	0.071	C4	CA	-0.149	C16	CA	-0.163	C9	CT	-0.037
O1	OS	-0.368	H4	HA	0.148	H19	HA	0.173	C10	C	0.816
C3	CT	0.136	C2	CA	-0.128	C15	CA	-0.064	O2	O	-0.573
H5	H1	0.071	H2	HA	0.152	H18	HA	0.142	O3	OS	-0.417
H6	H1	0.071	C1	CA	0.312	C14	CA	0.037	C11	CT	-0.005
C4	CT	-0.094	N1	NH	-0.746	C13	CT	-0.018	H17	H1	0.092
H7	HP	0.127	H1	H	0.386	H13	H1	0.074	H18	H1	0.092
H8	HP	0.127	S1	SY	0.996	H14	H1	0.074	H19	H1	0.092
N1	N3	-0.017	O1	O	-0.545	N1	N*	-0.164	H16	H1	0.110
H38	H	0.291	O2	O	-0.545	C3	CB	0.048	C12	CT	-0.128
C5	CT	-0.256	C7	CA	-0.019	C2	CA	-0.204	H20	HC	0.088
H9	HP	0.177	C8	CA	-0.008	H25	HA	0.162	H21	HC	0.088
H10	HP	0.177	C10	C	0.740	C1	CA	-0.168	C13	CA	0.012
C6	CT	-0.034	O3	O	-0.685	H24	HA	0.166	C16	CA	-0.154
H11	H1	0.140	O4	O	-0.685	C6	CA	-0.197	C17	CA	-0.088
H12	H1	0.140	S2	S	-0.014	H23	HA	0.159	H25	HA	0.133
O2	OS	-0.312	C11	CA	-0.269	C5	CA	0.047	H24	HA	0.139
C7	CA	0.020	H7	H4	0.206	C9	CT	-0.134	C14	CA	-0.154
C10	CA	0.085	C9	CA	-0.174	H10	HC	0.058	H22	HA	0.139
C11	CA	-0.220	H6	HA	0.159	H11	HC	0.058	C15	CA	-0.088
C12	CA	-0.116				H12	HC	0.058	H23	HA	0.133
C13	CA	-0.150				C4	CB	0.088	C18	CA	0.052
C14	CA	-0.133	1l8g			C8	C*	-0.221	C19	CZ	-0.094
H15	HA	0.103	C2	CA	-0.162	H22	HA	0.189	C20	CZ	-0.132
C15	CA	0.097	H1	HA	0.166	C7	C*	-0.037	C21	CA	0.066
H16	HA	0.163	C1	CA	-0.136	C10	C	0.423	C22	CA	-0.084
H17	HA	0.152	H2	HA	0.137	O1	O	-0.559	H26	HA	0.130
H18	HA	0.149	C4	CA	-0.051	N2	N	-0.184	C23	CA	-0.188
C8	CA	-0.131	H3	HA	0.131	H1	H	0.220	H27	HA	0.159
H14	HA	0.153	C5	CA	-0.091	C11	CT	-0.060	C26	CA	-0.090
C9	CM	-0.212	H4	HA	0.174	H2	H1	0.094	H30	HA	0.149
H13	HA	0.195	C6	CB	-0.054	H3	H1	0.094	C25	CA	-0.188
C16	CA	0.085	C3	CB	-0.103	C12	CA	-0.039	H29	HA	0.159

# Local Minimum Conformation

C24	CA	-0.084	C6	CT	-0.211	H12	HP	0.167			
H28	HA	0.130	H7	HC	0.043	N3	N3	-0.086			
			H8	HC	0.043	H24	H	0.294			
			H9	HC	0.043	C20	CT	0.018	1nhu		
1mmmb			C7	CT	-0.211	H13	HP	0.106	F1	F	-0.212
S1	S	-0.029	H10	HC	0.043	H14	HP	0.106	C24	CT	0.578
C1	CA	-0.222	H11	HC	0.043	C21	CT	-0.142	F2	F	-0.212
H1	H4	0.200	H12	HC	0.043	H15	HP	0.171	F3	F	-0.212
C2	C*	-0.254	H6	HC	0.063	H16	HP	0.171	C22	CA	-0.055
H2	HA	0.161	H4	HC	0.016	N4	N3	-0.044	C23	CA	-0.158
C3	C*	-0.010	H5	HC	0.016	C22	CT	-0.406	H16	HA	0.152
H3	HA	0.143	H3	HC	-0.025	H17	HP	0.212	C21	CA	-0.132
C4	CA	-0.001	C8	C	0.473	H18	HP	0.212	H13	HA	0.132
S2	S	-0.165	O3	O	-0.589	H19	HP	0.212	C20	CA	-0.195
C5	CT	-0.170	N2	N	-0.402	H25	H	0.351	H14	HA	0.149
H4	H1	0.154	H25	H	0.265	C23	CT	-0.142	C19	CA	-0.079
H5	H1	0.154	C9	CT	0.148	H20	HP	0.171	H15	HA	0.153
C6	CT	-0.265	C10	C	0.501	H21	HP	0.171	C18	CA	0.013
C7	C	0.868	N3	N	-0.391	C24	CT	0.018	C17	CT	-0.164
N1	N	-0.346	C11	CT	-0.197	H22	HP	0.106	H4	H1	0.135
O1	OH	-0.690	H14	H1	0.096	H23	HP	0.106	H5	H1	0.135
H6	H	0.266	H15	H1	0.096				N1	N	-0.078
O2	O	-0.750	H16	H1	0.096				C3	C	0.384
									O3	O	-0.554
H7	HC	0.066	H26	H	0.266	1mq6			C4	CA	0.106
C8	CT	-0.023	O4	O	-0.566	C3	CA	-0.331	C5	CA	-0.090
C9	CT	-0.080	H13	H1	0.008	H1	HA	0.162	C6	CA	-0.154
C10	CT	0.174	C12	CT	-0.091	C2	CA	0.001	C7	CA	0.004
C11	CT	-0.363	H17	HC	0.059	H2	HA	0.163	C8	CA	-0.031
H8	HC	0.087	H18	HC	0.059	C1	CM	-0.122	C9	CA	-0.070
H9	HC	0.087	C13	CA	0.090	C11	CI	-0.091	C12	CI	-0.091
H10	HC	0.087	C14	CA	-0.161	C4	CA	0.256	H6	HA	0.116
C12	CT	-0.363	H19	HA	0.110	H3	H4	0.101	CI1	CI	-0.141
H11	HC	0.087	C15	CA	-0.161	N1	NC	-0.508	H7	HA	0.153
H12	HC	0.087	H20	HA	0.109	C5	CA	0.589	H8	HA	0.176
H13	HC	0.087	C16	CA	-0.106	N2	N	-0.589	C1	CT	0.059
H14	HC	0.050	H21	HA	0.108	H4	H	0.318	C2	C	0.714
H15	HC	0.071	C17	CA	-0.161	C6	C	0.610	O1	O	-0.753
H16	HC	0.071	H22	HA	0.109	O1	O	-0.526	O2	O	-0.753
H17	HC	0.060	C18	CA	-0.161	C7	CA	-0.018	H3	H1	0.037
C13	C	0.103	H23	HA	0.110	C8	CA	-0.113	C10	CT	-0.012
O3	O	-0.446				H9	HA	0.147	H1	HC	0.035
N2	N	-0.252				C9	CA	-0.110	H2	HC	0.035
H18	H	0.292	1mq5			C12	CI	-0.056	C11	CA	-0.021
C14	CT	0.077	C3	CA	-0.175	C10	CA	-0.014	C12	CA	-0.122
C15	C	0.499	H1	HA	0.157	H8	HA	0.117	H12	HA	0.125
N3	N	-0.413	C2	CA	-0.065	C11	CA	0.148	C13	CA	-0.178
C16	CT	-0.115	H2	HA	0.145	O2	OS	-0.254	H11	HA	0.130
H19	H1	0.078	C1	CA	-0.024	C12	CT	-0.024	C14	CA	-0.127
H20	H1	0.078	C11	CI	-0.086	H5	H1	0.084	H10	HA	0.116
H21	H1	0.078	C4	CA	-0.065	H6	H1	0.084	C15	CA	-0.178
H22	H	0.298	H3	HA	0.145	H7	H1	0.084	H9	HA	0.130
O4	O	-0.558	C5	CA	-0.175	C13	CA	0.027	C16	CA	-0.122
H23	H1	0.057	H4	HA	0.157	N3	N	-0.402	H17	HA	0.125
C17	CT	-0.035	C6	CA	0.122	H10	H	0.305			
H24	HC	0.038	N1	N	-0.398	C14	C	0.613			
H25	HC	0.038	H5	H	0.297	O3	O	-0.507	1nhv		
C18	CA	0.016	C7	C	0.564	C15	C*	-0.050	C15	CA	-0.157
C19	CA	-0.168	O1	O	-0.522	S1	S	0.027	C16	CA	-0.125
H26	HA	0.141	C8	CA	-0.059	C17	CA	-0.148	H11	HA	0.118
C20	CA	-0.131	C9	CA	-0.077	H11	H4	0.237	H10	HA	0.128
H27	HA	0.132	H8	HA	0.140	C16	C*	-0.019	C14	CA	-0.159
C21	CA	-0.141	C10	CA	-0.055	C13	CI	-0.025	H9	HA	0.123
H28	HA	0.131	C12	CI	-0.056	C18	C*	-0.050	C13	CA	-0.157
C22	CA	-0.131	C11	CA	-0.015	C19	CT	-0.018	H8	HA	0.128
H29	HA	0.132	H7	HA	0.149	H12	HP	0.111	C12	CA	-0.125
C23	CA	-0.168	C12	CA	-0.147	H13	HP	0.111	H7	HA	0.118
H30	HA	0.141	H6	HA	0.155	N4	N3	-0.146	C11	CA	-0.015
			C13	CA	-0.005	C20	CT	-0.071	C10	CT	-0.024
1mnc			N2	N	-0.214	H14	HP	0.106	H5	HC	0.050
			H9	H	0.221	H15	HP	0.106	H6	HC	0.050
O1	OH	-0.604	C14	C	0.598	H16	HP	0.106	C1	CT	0.058
N1	N	-0.242	O2	O	-0.497	H21	H	0.310	C2	C	0.694
H24	H	0.260	C15	C*	-0.154	C21	C2	0.736	O1	O	-0.748
C1	C	0.488	S1	S	0.180	N5	N2	-0.553	O2	O	-0.748
O2	O	-0.648	C17	CA	-0.243	C22	CT	0.041	H1	H1	0.060
C2	CT	0.011	H10	H4	0.233	H17	H1	0.114	N1	N	-0.172
H1	HC	-0.038	C16	C*	-0.029	H18	H1	0.114	C3	C	0.443
H2	HC	-0.038	C13	CI	-0.041	C23	CT	-0.007	O3	O	-0.563
C3	CT	0.189	C18	C*	0.053	H19	H1	0.127	C4	CA	0.102
C4	CT	-0.086	C19	CT	-0.154	H20	H1	0.127	C5	CA	-0.122
C5	CT	0.085	H11	HP	0.167	O4	OS	-0.430	C6	CA	-0.123

# Local Minimum Conformation

C7	CA	0.008	C15	CT	-0.028	C26	CT	-0.067	C8	CA	-0.221
C8	CA	-0.033	H22	HC	0.049	H34	HC	0.084	H7	HA	0.165
C9	CA	-0.078	H23	HC	0.049	H35	HC	0.084	C7	CA	-0.121
Cl2	CI	-0.087	C16	CA	0.013	C20	CT	0.014	H6	HA	0.151
H4	HA	0.119	C17	CA	-0.150	H33	HP	0.079	C6	CA	-0.103
Cl1	CI	-0.147	H24	HA	0.141	C21	C	0.095	H5	HA	0.149
H3	HA	0.144	C18	CA	-0.175	O4	O	-0.361	C5	CA	-0.209
H2	HA	0.184	H25	HA	0.141	N3	N	-0.233	H4	HA	0.153
C17	CT	-0.167	C19	CA	-0.103	H32	H	0.268	C10	CA	0.120
H12	H1	0.175	H26	HA	0.126	C22	CT	0.192	C4	CA	-0.197
H13	H1	0.175	C20	CA	-0.175	C24	CT	-0.165	H3	HA	0.166
C18	CA	0.025	H27	HA	0.141	H26	HC	0.058	C3	CA	-0.165
S1	S	-0.130	C21	CA	-0.150	H27	HC	0.058	H2	HA	0.165
C19	C*	-0.203	H28	HA	0.141	H28	HC	0.058			
H14	HA	0.185				C25	CT	-0.165			
C20	C*	-0.056				H29	HC	0.058	1pph		
H15	HA	0.124	1ohr			H30	HC	0.058	C5	CA	-0.162
C21	C*	-0.032	C3	CT	-0.151	H31	HC	0.058	C6	CA	-0.155
C22	C*	0.220	H2	HC	0.068	C23	CT	-0.165	H4	HA	0.168
C23	C*	-0.366	H3	HC	0.068	H23	HC	0.058	H3	HA	0.156
H16	HA	0.217	H4	HC	0.068	H24	HC	0.058	C4	CA	0.111
C24	CB	0.091	C2	CA	0.039	H25	HC	0.058	C7	CT	-0.191
C25	CA	-0.203	C1	CA	0.286				H5	HC	0.080
H17	HA	0.156	O1	OH	-0.588				H6	HC	0.080
C26	CA	-0.210	H1	HO	0.446	1ppc			H7	HC	0.080
H18	HA	0.146	C4	CA	-0.237	N3	NH	-0.791	C3	CA	-0.162
C27	CA	-0.139	H5	HA	0.167	H15	H	0.430	H2	HA	0.156
H19	HA	0.140	C5	CA	-0.207	H22	H	0.430	C2	CA	-0.155
C28	CA	-0.267	H6	HA	0.189	C22	CA	0.670	H1	HA	0.168
H20	HA	0.170	C6	CA	-0.122	N4	NH	-0.791	C1	CA	0.013
C29	CB	0.287	H7	HA	0.133	H16	H	0.430	S1	SY	0.815
O4	OS	-0.283	C7	CA	-0.069	H17	H	0.430	O1	O	-0.506
			C8	C	0.327	C21	CA	-0.079	O2	O	-0.506
			O2	O	-0.437	C20	CA	-0.179	N1	NT	-0.471
1o86			N1	N	-0.274	C18	CA	-0.105	H15	H	0.330
O1	O	-0.683	H8	H	0.239	H19	HA	0.168	C9	CT	0.070
C1	C	0.680	C9	CT	0.143	H21	HA	0.154	C10	CT	0.033
O2	O	-0.683	C10	CT	-0.225	C19	CA	-0.179	C11	CA	-0.004
C2	CT	0.024	S1	S	-0.246	H20	HA	0.154	C12	CA	-0.091
H7	H1	0.056	C11	CA	0.145	C17	CA	-0.105	C14	CA	-0.170
C3	CT	-0.032	C12	CA	-0.089	H18	HA	0.168	C16	CA	-0.077
H5	HC	0.038	C13	CA	-0.212	C16	CA	0.090	C15	CA	-0.162
H6	HC	0.038	C14	CA	-0.082	C15	CT	-0.092	C13	CA	-0.049
C4	CT	-0.051	C15	CA	-0.212	H13	HC	0.062	H12	HA	0.141
H3	HC	0.053	C16	CA	-0.089	H14	HC	0.062	H13	HA	0.170
H4	HC	0.053	H9	HA	0.126	C13	CT	0.121	H14	HA	0.128
C5	CT	-0.150	H10	HA	0.167	C14	C	0.413	C17	CA	0.693
H1	H1	0.093	H11	HA	0.151	O4	O	-0.531	N2	NH	-0.760
H2	H1	0.093	H12	HA	0.167	N5	N	-0.153	H16	H	0.412
N1	N	-0.009	H13	HA	0.126	C23	CT	0.018	H17	H	0.412
C6	C	0.205	H14	H1	0.114	C24	CT	0.007	N3	NH	-0.760
O3	O	-0.493	H15	H1	0.114	C25	CT	-0.067	H18	H	0.412
C7	CT	0.003	H16	H1	0.131	C26	CT	0.007	H19	H	0.412
C8	CT	-0.001	C17	CT	0.102	C27	CT	0.018	H11	HA	0.157
C9	CT	-0.051	O3	OH	-0.654	H31	H1	0.034	H9	HC	0.022
C10	CT	-0.082	H17	HO	0.433	H32	H1	0.034	H10	HC	0.022
C11	CT	0.080	H18	H1	0.166	H29	HC	0.026	H8	H1	0.129
N2	N3	-0.337	C18	CT	-0.004	H30	HC	0.026	C8	C	0.358
H8	H	0.284	H19	HP	0.075	H27	HC	0.022	O3	O	-0.512
H9	H	0.284	H20	HP	0.075	H28	HC	0.022	N4	N	-0.124
H31	H	0.284	N2	N3	-0.001	H25	HC	0.026	C18	CT	-0.022
H10	HP	0.063	H46	H	0.168	H26	HC	0.026	H20	H1	0.055
H11	HP	0.063	C19	CT	-0.006	H29	HC	0.026	H21	H1	0.055
H12	HC	0.048	H21	HP	0.065	H24	H1	0.034	C19	CT	0.003
H13	HC	0.048	H22	HP	0.065	H12	H1	0.036	H22	HC	0.023
H14	HC	0.027	C28	CT	0.029	N2	N	-0.322	H23	HC	0.023
H15	HC	0.027	H37	HC	0.049	H11	H	0.278	C20	CT	-0.041
H16	HC	0.054	C29	CT	-0.032	C12	C	0.559	H24	HC	0.027
H17	HC	0.054	H38	HC	0.020	O3	O	-0.591	H25	HC	0.027
H18	HP	0.076	H39	HC	0.020	C11	CT	-0.066	C21	CT	0.003
N3	N3	-0.006	C30	CT	0.016	H9	H1	0.121	H26	HC	0.023
H29	H	0.209	H40	HC	0.014	H10	H1	0.121	H27	HC	0.023
H30	H	0.209	H41	HC	0.014	N1	NT	-0.655	C22	CT	-0.022
C12	CT	0.006	C31	CT	-0.009	H8	H	0.395	H28	H1	0.055
C13	C	0.717	H42	HC	0.019	S1	SY	0.928	H29	H1	0.055
O4	O	-0.710	H43	HC	0.019	O1	O	-0.505			
O5	O	-0.710	C32	CT	-0.042	O2	O	-0.505	1qbu		
H19	HP	0.054	H44	HC	0.023	C2	CA	-0.025			
C14	CT	0.063	H45	HC	0.023	C1	CA	-0.131	C16	CV	-0.013
H20	HC	-0.005	C27	CT	-0.015	H1	HA	0.154	N4	NB	-0.383
H21	HC	-0.005	H36	HC	0.013	C9	CA	0.106	H15	H4	0.146

## Local Minimum Conformation

C17	CA	-0.317	C1	CT	0.235	N4	NT	-0.374	H10	H1	0.142
H16	H4	0.227	H8	H1	0.005	S1	SY	0.844	H11	H1	0.142
S1	S	0.038	H9	H1	0.005	O2	O	-0.491	C9	CT	0.035
C15	CR	0.355	C2	CT	-0.012	O3	O	-0.491	H12	H1	0.073
N3	N	-0.307	H6	HC	0.044	C16	CA	-0.004	H13	H1	0.073
H17	H	0.175	H7	HC	0.044	C18	CA	-0.217	C6	CT	-0.206
C14	C	0.582	C3	CT	-0.056	C19	CA	-0.177	H8	H1	0.142
O4	O	-0.536	H4	HC	0.036	H7	HA	0.167	H9	H1	0.142
C10	CA	-0.078	H5	HC	0.036	H6	HA	0.189	C7	CT	0.035
C11	CA	-0.080	C4	CT	-0.094	C17	CA	-0.039	H6	H1	0.073
C12	CA	-0.197	H2	H1	0.077	H11	HA	0.138	H7	H1	0.073
C13	CA	-0.131	H3	H1	0.077	C20	CA	0.055	N4	NH	-0.286
H11	HA	0.143	N1	N*	-0.021	C21	CA	0.075	C10	CA	0.020
H12	HA	0.158	C9	CK	0.112	C22	CA	-0.079	C11	CA	-0.075
H13	HA	0.149	N5	NB	-0.559	H8	HA	0.129	H14	HA	0.102
C9	CA	-0.142	C8	CB	0.199	C25	CA	-0.022	C12	CA	0.037
H14	HA	0.141	C7	C	0.525	Cl1	CI	-0.087	C13	CT	-0.135
C8	CA	0.006	N4	N	-0.505	C23	CA	-0.053	H15	HC	0.060
C2	CT	-0.041	H12	H	0.339	H9	HA	0.144	H16	HC	0.060
H18	H1	0.083	O2	O	-0.547	C24	CA	-0.225	H17	HC	0.060
H19	H1	0.083	H11	H5	0.161	H10	HA	0.168	C14	CA	-0.098
N1	N	0.002	C5	CB	0.101				H18	HA	0.141
C1	C	0.273	N2	NC	-0.399				C15	CA	-0.227
O1	O	-0.528	C6	CA	0.497	1qpe					
N2	N	0.005	N3	NH	-0.471	C13	CT	-0.362	H19	HA	0.172
C7	CT	-0.248	H1	H	0.325	H9	HC	0.137	C16	CA	-0.141
C32	CX	0.018	C13	CM	0.122	H10	HC	0.137	H20	HA	0.159
C33	CX	-0.347	C12	CM	-0.117	H11	HC	0.137			
C34	CX	-0.347	H13	HA	0.137	C12	CT	0.111	1syn		
H29	HC	0.156	C11	CA	-0.201	C14	CT	-0.362	C1	CA	-0.130
H30	HC	0.156	H17	HA	0.152	H12	HC	0.137	H1	HA	0.155
H31	HC	0.156	C10	CA	-0.067	H13	HC	0.137	C2	CA	-0.169
H32	HC	0.156	H16	HA	0.122	H14	HC	0.137	H2	HA	0.134
H28	HC	0.072	C15	CA	-0.201	C15	CT	-0.362	C3	CA	0.017
H26	H1	0.148	H15	HA	0.152	H15	HC	0.137	C4	CA	-0.147
H27	H1	0.148	C14	CM	-0.117	H16	HC	0.137	H3	HA	0.152
C6	CT	0.006	H14	HA	0.137	H17	HC	0.137	C5	CA	-0.189
C25	CT	-0.088				N4	N*	-0.003	H4	HA	0.136
C26	CA	0.012				N3	NA	-0.113	C6	CA	0.242
C27	CA	-0.127	1ql9			H1	H	0.333	N1	NC	-0.615
C28	CA	-0.184	C2	CA	-0.204	C1	CA	0.340	C7	CD	0.507
C29	CA	-0.096	H3	HA	0.173	N1	NC	-0.541	C8	CT	-0.162
C30	CA	-0.184	C1	CA	-0.073	C2	CA	0.526	H5	HC	0.060
C31	CA	-0.127	H2	H4	0.212	H4	H5	0.097	H6	HC	0.060
H5	HA	0.124	N1	NA	-0.100	N2	NC	-0.641	H7	HC	0.060
H4	HA	0.147	H1	H	0.320	C3	CA	0.627	N2	N	-0.414
H3	HA	0.127	C4	CA	-0.073	N5	NH	-0.832	H8	H	0.296
H2	HA	0.147	H5	H4	0.212	H2	H	0.414	C9	C	0.489
H1	HA	0.124	C3	CA	-0.204	H3	H	0.414	O1	O	-0.538
H33	HC	0.055	H4	HA	0.173	C4	CA	-0.072	C10	CA	0.011
H34	HC	0.055	C5	CA	0.321	C5	CA	-0.018	C11	CA	-0.056
H25	H1	0.053	N2	NH	-0.195	C6	CA	0.054	C12	CA	-0.130
C5	CT	0.170	C9	CT	0.004	C7	CA	-0.141	H9	HA	0.134
O3	OH	-0.650	C8	CT	-0.064	H5	HA	0.150	C13	CA	0.013
H35	HO	0.421	H21	HC	0.066	C8	CA	-0.063	C14	CT	0.069
H22	H1	0.043	H22	HC	0.066	H6	HA	0.157	H10	H1	0.078
C4	CT	0.087	H23	H1	0.065	C9	CA	-0.012	H11	H1	0.078
O2	OH	-0.660	H24	H1	0.065	Cl1	CI	-0.032	N3	NH	-0.690
H36	HO	0.444	C6	CT	0.004	C10	CA	-0.063	H12	H	0.375
H21	H1	0.078	H25	H1	0.065	H7	HA	0.157	C15	CA	0.106
C3	CT	-0.007	H26	H1	0.065	C11	CA	-0.141	C18	CA	-0.156
H20	H1	0.112	C7	CT	-0.064	H8	HA	0.150	H15	HA	0.166
C18	CT	-0.029	H27	HC	0.066				C16	CA	-0.147
H23	HC	0.052	H28	HC	0.066				H14	HA	0.097
H24	HC	0.052	C10	CT	0.068	1r09			C17	CA	-0.189
C19	CA	-0.021	H20	HC	0.023	C1	CT	0.020	H13	HA	0.139
C20	CA	-0.121	C11	C	0.335	H1	H1	0.092	C21	CA	0.016
H10	HA	0.126	O1	O	-0.536	H2	H1	0.092	C22	C	0.489
C21	CA	-0.126	N3	N	-0.117	H3	H1	0.092	O2	O	-0.615
H9	HA	0.126	C15	CT	-0.029	O1	OS	-0.424	C19	CA	-0.032
C22	CA	-0.173	C14	CT	-0.022	C2	CA	0.812	C20	CT	-0.079
H8	HA	0.145	H18	H1	0.090	N1	NC	-0.528	H21	H1	0.088
C23	CA	-0.126	H19	H1	0.090	N2	NA	0.011	H22	H1	0.088
H7	HA	0.126	H16	H1	0.090	H21	H	0.301	N4	N	-0.063
C24	CA	-0.121	H17	H1	0.090	C3	CA	-0.252	C23	CT	0.057
H6	HA	0.126	C12	CT	-0.029	H5	HA	0.207	H16	H1	0.058
			H14	H1	0.090	C4	CA	-0.099	C24	C	0.766
			H15	H1	0.090	H4	HA	0.191	O3	O	-0.810
1qli			C13	CT	-0.022	C5	CA	0.173	O4	O	-0.810
O1	OH	-0.701	H12	H1	0.090	N3	NH	-0.055	C25	CT	-0.027
H10	HO	0.429	H13	H1	0.090	C8	CT	-0.206	H17	HC	0.003

# Local Minimum Conformation

H18	HC	0.003	C1	CT	-0.035	C6	CT	-0.008	H1	HP	0.120
C26	CT	0.040	H5	HC	0.026	H8	H1	0.110	H2	HP	0.120
H19	HC	-0.075	H6	HC	0.026	H9	H1	0.110	H3	HP	0.120
H20	HC	-0.075	C6	CT	-0.033	C7	CT	0.131	N1	N3	-0.040
C27	C	0.783	H14	HC	0.025	H10	H1	0.057	H4	H	0.277
O6	O	-0.824	H15	HC	0.025	H11	H1	0.057	H16	H	0.277
O5	O	-0.824	C5	CT	-0.035	O1	OS	-0.264	C2	CT	0.008
			H12	HC	0.026	C8	CA	0.016	H5	HP	0.087
			H13	HC	0.026	C13	CA	-0.075	H6	HP	0.087
1thl			C4	CT	-0.003	C12	CA	-0.017	C3	CT	-0.008
C9	CA	-0.140	H10	HC	0.026	C11	CA	-0.205	H7	H1	0.109
C8	CA	-0.205	H11	HC	0.026	H13	HA	0.176	H8	H1	0.109
C6	CA	-0.099	C3	CT	-0.036	C14	CT	-0.147	N2	NT	-0.674
H7	HA	0.119	H9	H1	0.153	H15	HC	0.072	H9	H	0.409
H9	HA	0.124	S1	S6	0.683	H16	HC	0.072	S1	SY	0.754
H10	HA	0.102	O1	O	-0.479	H17	HC	0.072	O1	O	-0.441
C7	CA	-0.205	O2	O	-0.479	H14	HA	0.116	O2	O	-0.441
H8	HA	0.124	N1	NT	-0.550	C9	CA	-0.043	C4	CA	0.013
C5	CA	-0.099	H1	H	0.389	H12	HA	0.149	C5	CA	-0.038
H6	HA	0.119	C7	CT	0.003	C10	CA	0.103	H10	HA	0.137
C4	CA	0.025	H16	H1	0.101	N3	NH	-0.571	C6	CA	-0.166
C3	CT	0.022	H17	H1	0.101	H3	H	0.375	H11	HA	0.172
H4	HC	0.011	C8	C	0.465	S1	SY	0.817	C7	CA	-0.200
H5	HC	0.011	O3	O	-0.552	O2	O	-0.497	H12	HA	0.193
C2	CT	-0.038	N2	N	-0.328	O3	O	-0.497	C8	CA	0.015
H2	HC	-0.012	H2	H	0.287	C15	CA	0.014	C9	CA	0.259
H3	HC	-0.012	C9	CT	0.068	C16	CA	-0.096	H13	H4	0.093
C1	CT	0.071	C17	C	0.467	H18	HA	0.153	N3	NC	-0.526
C10	C	0.720	O4	O	-0.558	C17	CA	-0.160	C10	CA	0.269
O1	O	-0.795	N5	N	-0.143	H19	HA	0.163	H14	H4	0.105
O2	O	-0.795	C18	CT	0.005	C18	CA	-0.075	C11	CA	-0.342
H1	HC	-0.020	C19	CT	-0.019	H20	HA	0.155	H15	HA	0.161
C11	CT	0.231	C20	CT	-0.026	C19	CA	-0.160	C12	CA	0.135
H11	HC	-0.101	C21	CT	-0.019	H21	HA	0.163			
H12	HC	-0.101	C22	CT	0.005	C20	CA	-0.096			
C12	CT	0.174	H35	H1	0.052	H22	HA	0.153			
C13	CT	0.016	H36	H1	0.052				1ydt		
C15	CT	0.006	H33	HC	0.020				C2	CA	0.121
C16	CT	0.006	H34	HC	0.020				C1	CA	-0.366
C14	CT	0.016	H31	HC	0.025				H1	HA	0.172
H15	HC	-0.028	H32	HC	0.025				C3	CA	0.290
H16	HC	-0.028	H29	HC	0.020				H2	H4	0.097
H19	HC	-0.022	H30	HC	0.020				N1	NC	-0.539
H20	HC	-0.022	H27	H1	0.052				C4	CA	0.284
H17	HC	-0.022	H28	H1	0.052				H3	H4	0.083
H18	HC	-0.022	H18	H1	0.032				C5	CA	0.013
H13	HC	-0.028	C10	CT	-0.100				C6	CA	-0.214
H14	HC	-0.028	H19	HC	0.079				H4	HA	0.195
C17	C	0.328	H20	HC	0.079				C7	CA	-0.165
O3	O	-0.545	C11	CT	-0.050				H5	HA	0.175
N1	N	-0.297	H21	H1	0.119				C8	CA	-0.048
H21	H	0.262	H22	H1	0.119				H6	HA	0.132
C18	CT	-0.132	N3	NH	-0.444				C9	CA	0.034
C19	C	0.713	H3	H	0.337				S1	SY	0.794
O4	O	-0.725	C12	CA	0.317				O1	O	-0.462
O5	O	-0.725	C13	CA	-0.162				O2	O	-0.462
H22	H1	0.094	H23	HA	0.159				N2	NT	-0.637
C20	CT	-0.124	C14	CA	-0.069				O1	O	-0.490
H23	HC	0.083	H24	H4	0.214				H7	H	0.389
H24	HC	0.083	N4	NA	-0.123				C10	CT	0.019
C21	C*	-0.042	H4	H	0.326				H8	H1	0.090
C22	CW	-0.101	C15	CA	-0.069				H9	H1	0.090
H25	H4	0.188	H25	H4	0.214				C11	CT	0.074
N2	NA	-0.389	C16	CA	-0.162				H10	HP	0.061
H26	H	0.345	H26	HA	0.159				H11	HP	0.061
C24	CN	0.077							N3	N3	-0.132
C23	CB	0.089							H12	H	0.280
C25	CA	-0.141							H21	H	0.280
H27	HA	0.124							C12	CT	-0.007
C27	CA	-0.240							H13	HP	0.105
H29	HA	0.130							H14	HP	0.105
C28	CA	-0.161							C13	CM	-0.221
H30	HA	0.118							H15	HA	0.153
C26	CA	-0.216							C14	CM	-0.106
H28	HA	0.128							H16	HA	0.163
									C15	CA	0.001
1uvs									C16	CA	-0.112
C2	CT	-0.003							H17	HA	0.131
H7	HC	0.026							C17	CA	-0.054
H8	HC	0.026							H18	HA	0.141
									C18	CA	-0.090
									Br1	Br	-0.025
									C19	CA	-0.054

# Local Minimum Conformation

H19	HA	0.141	H8	H1	0.107	C7	CM	0.145	C7	CC	0.296
C20	CA	-0.112	C11	CT	-0.007	C8	C	0.793	C8	CM	0.049
H20	HA	0.131	H9	HP	0.095	O2	O	-0.741	C9	CA	-0.168
			H10	HP	0.095	O3	O	-0.741	C10	CA	-0.216
			N3	N3	-0.157	O4	OS	-0.252	C11	CA	0.316
2cgr			H11	H	0.276	C9	CT	0.075	C12	CA	-0.216
N1	N1	-0.445	H12	H	0.276	H11	H1	0.108	C13	CA	-0.168
C1	CG	0.353	H13	H	0.276	C10	C	0.401	H13	HA	0.164
C2	CA	0.022				O5	O	-0.490	H14	HA	0.192
C5	CA	-0.157				N5	N	-0.128	F1	F	-0.163
H3	HA	0.179	2pcp			C11	CT	-0.119	H15	HA	0.192
C6	CA	-0.113	C6	CA	-0.206	H12	H1	0.087	H16	HA	0.164
H4	HA	0.144	C7	CA	-0.088	H13	H1	0.087	C14	C*	-0.128
C3	CA	-0.157	H1	HA	0.114	H14	H1	0.087	C15	CM	0.003
H2	HA	0.179	H2	HA	0.167	C12	CT	-0.124	N6	NA	-0.072
C4	CA	-0.113	C5	CA	-0.054	H15	H1	0.099	H21	H	0.213
H1	HA	0.144	H3	HA	0.154	H16	H1	0.099	C16	CM	-0.257
C7	CA	0.083	C4	CA	-0.206	C13	CT	-0.003	H17	HA	0.152
N2	NH	-0.262	H4	HA	0.167	H17	HC	0.020	C17	CA	0.336
H5	H	0.292	C3	CA	-0.088	H18	HC	0.020	H18	H4	0.143
C8	C2	0.331	H5	HA	0.114	C14	CT	-0.013	N4	NC	-0.532
N3	NH	-0.258	C2	CA	0.098	H19	HC	0.000	C18	CA	0.726
C9	CT	-0.086	C8	CT	-0.009	H20	HC	0.000	N5	NH	-0.959
C10	C	0.730	C9	CT	-0.088	H21	HC	0.000	H19	H	0.483
O1	O	-0.704	C10	CT	-0.011				H20	H	0.483
O2	O	-0.704	C11	CT	-0.035						
H6	H1	0.062	C12	CT	-0.011	3cpa					
H7	H1	0.062	C13	CT	-0.088	N1	NT	-1.026	3ert		
H20	H	0.325	H12	HC	0.051	H1	H	0.368	C23	CT	-0.211
N4	NH	-0.482	H13	HC	0.051	H2	H	0.368	H19	HP	0.138
H8	H	0.310	H25	HC	0.037	C1	CT	0.208	H20	HP	0.138
C11	CT	0.012	H26	HC	0.037	H3	H1	0.040	H21	HP	0.138
H14	H1	0.119	H10	HC	0.035	H4	H1	0.040	N1	N3	0.027
C18	CA	0.080	H11	HC	0.035	C2	C	0.821	C24	CT	-0.211
C19	CA	-0.133	H8	HC	0.037	O1	O	-0.718	H16	HP	0.138
H15	HA	0.135	H9	HC	0.037	N2	N	-0.918	H17	HP	0.138
C20	CA	-0.196	H6	HC	0.051	H13	H	0.308	H18	HP	0.138
H16	HA	0.158	H7	HC	0.051	C3	CT	0.532	H15	H	0.295
C21	CA	-0.078	N1	N3	-0.136	C4	C	0.585	C22	CT	-0.132
H17	HA	0.135	H14	H	0.305	O2	O	-0.718	H24	HP	0.139
C22	CA	-0.196	C14	CT	-0.068	O3	O	-0.718	H25	HP	0.139
H18	HA	0.158	H17	HP	0.108	H5	H1	-0.033	C21	CT	0.015
C23	CA	-0.133	H18	HP	0.108	C5	CT	-0.041	H22	H1	0.108
H19	HA	0.135	C15	CT	-0.060	H6	HC	0.017	H23	H1	0.108
C12	CA	0.080	H19	HC	0.057	H7	HC	0.017	O2	OS	-0.282
C13	CA	-0.133	H20	HC	0.057	C6	CA	0.008	C20	CA	0.150
H13	HA	0.135	C1	CT	-0.032	C7	CA	-0.187	C25	CA	-0.203
C14	CA	-0.196	H23	HC	0.055	H8	HA	0.173	C26	CA	-0.082
H12	HA	0.158	H24	HC	0.055	C8	CA	-0.256	H10	HA	0.129
C15	CA	-0.078	C16	CT	-0.060	H9	HA	0.149	H11	HA	0.135
H11	HA	0.135	H21	HC	0.057	C9	CA	0.285	C19	CA	-0.203
C16	CA	-0.196	H22	HC	0.057	O4	OH	-0.536	H12	HA	0.135
H10	HA	0.158	C17	CT	-0.068	H10	HO	0.352	C18	CA	-0.082
C17	CA	-0.133	H15	HP	0.108	C10	CA	-0.256	H13	HA	0.129
H9	HA	0.135	H16	HP	0.108	H11	HA	0.149	C17	CA	-0.011
						C11	CA	-0.187	C10	CM	-0.054
						H12	HA	0.173	C11	CA	0.022
2csn			2qwi						C12	CA	-0.142
C6	CA	0.000	O1	O	-0.595			C13	CA	-0.258	
H5	HA	0.151	C1	C	0.671	3erk		C14	CA	0.336	
C5	CA	-0.115	C2	CT	-0.131	C1	CT	0.016	O1	OH	-0.542
H4	HA	0.166	H1	HC	0.053	H1	HC	0.051	H14	HO	0.398
C4	CA	-0.085	H2	HC	0.053	H2	HC	0.051	C15	CA	-0.258
Cl1	CI	-0.007	H3	HC	0.053	C2	CT	-0.083	C16	CA	-0.142
C9	CA	0.242	N1	N	-0.763	H3	HP	0.125	H3	HA	0.153
C3	CA	-0.304	H4	H	0.372	H4	HP	0.125	H4	HA	0.166
H3	HA	0.155	C3	CT	0.043	N1	N3	-0.151	H1	HA	0.166
C2	CA	0.249	H5	H1	0.173	H5	H	0.296	H2	HA	0.153
H2	H4	0.112	C4	CT	0.154	H6	H	0.296	C3	CM	-0.041
N1	NC	-0.537	N2	NH	-0.348	C3	CT	-0.083	C2	CT	-0.050
C1	CA	0.251	C5	CM	0.726	H7	HP	0.125	C1	CT	-0.076
H1	H4	0.120	N3	NH	-0.866	H8	HP	0.125	H28	HC	0.026
C8	CA	-0.007	H6	H	0.432	C4	CT	0.016	H29	HC	0.026
C7	CA	-0.060	H22	H	0.432	H9	HC	0.051	H30	HC	0.026
S1	SY	0.658	N4	NH	-0.866	H10	HC	0.051	H26	HC	0.054
O1	O	-0.443	H7	H	0.432	C5	CT	0.087	H27	HC	0.054
O2	O	-0.443	H8	H	0.432	H11	H1	0.053	C4	CA	0.054
N2	NT	-0.765	H9	H	0.304	N2	N*	0.002	C5	CA	-0.066
H6	H	0.454	H10	H1	0.093	C6	CK	0.033	H5	HA	0.110
C10	CT	0.142	C6	CM	-0.424	H12	H5	0.215	C6	CA	-0.213
H7	H1	0.107	H23	HA	0.158	N3	NB	-0.434	H6	HA	0.153

# Local Minimum Conformation

C7	CA	-0.101	C6	CT	-0.004				H11	HA	0.145
H7	HA	0.141	C7	C	0.708			C16	CA	-0.191	
C8	CA	-0.213	O2	O	-0.712	4std		H10	HA	0.160	
H8	HA	0.153	O3	O	-0.712	F1	F	-0.192	C17	CA	-0.114
C9	CA	-0.066	H13	H1	0.108	C5	CA	0.218	H9	HA	0.120
H9	HA	0.110	C8	CT	-0.125	C6	CA	-0.160			
			H14	HC	0.080	H9	HA	0.176			
			H15	HC	0.080	C4	CA	-0.151			
						H8	HA	0.174	5tln		
3std			C9	C*	-0.091	C3	CA	-0.292	O6	O	-0.474
N1	N1	-0.348	C10	CW	-0.047	H7	HA	0.179	N5	NO	0.746
C1	CG	0.202	H16	H4	0.160	C2	CA	0.176	O7	O	-0.474
C2	CA	0.375	N3	NA	-0.687	O2	OH	-0.498	C20	CA	0.059
N2	NC	-0.313	H17	H	0.410	H6	HO	0.427	C21	CA	-0.217
N3	NA	-0.001	C12	CN	0.279	C1	CA	-0.033	C16	CA	-0.128
H21	H	0.329	C11	CB	0.068	C7	C	0.468	H19	HA	0.165
C3	CA	0.118	C13	CA	-0.115	O1	O	-0.543	H22	HA	0.181
C4	CA	-0.276	H18	HA	0.195	N1	N	-0.228	C19	CA	-0.217
H1	HA	0.193	C15	CA	-0.234	H1	H	0.158	H21	HA	0.181
C5	CA	-0.019	H20	HA	0.166	C8	CT	0.036	C18	CA	-0.128
H2	HA	0.179	C16	CA	-0.136	C9	CT	-0.131	H20	HA	0.165
C6	CA	-0.129	H21	HA	0.152	H3	HC	0.048	C17	CA	0.091
H3	HA	0.171	C14	CA	-0.286	H4	HC	0.048	N4	N	-0.227
C7	CA	-0.142	H19	HA	0.149	H5	HC	0.048	H18	H	0.149
H4	HA	0.122				H2	H1	0.088	C1	C	0.576
C8	CA	0.102				C10	CA	0.024	O1	O	-0.550
C9	CA	0.076	4dfr			C11	CA	-0.145	C2	CT	-0.081
N4	NH	-0.288	N1	NC	-0.364	H13	HA	0.142	H1	H1	0.088
H5	H	0.274	C1	CA	0.218	C12	CA	-0.067	H2	H1	0.088
C10	CT	0.011	C2	CA	0.346	H12	HA	0.133	N1	N	-0.198
H6	H1	0.094	N2	NH	-0.557	C13	CA	-0.076	H3	H	0.235
H7	H1	0.094	H1	H	0.344	Br1	Br	-0.089	C3	C	0.368
C11	CT	-0.066	H21	H	0.344	C14	CA	-0.067	O2	O	-0.548
H8	HC	0.062	N3	NC	-0.548	H11	HA	0.133	C4	CT	0.186
H9	HC	0.062	C3	CA	0.817	C15	CA	-0.145	C5	CT	-0.190
C12	CT	-0.017	N4	NH	-0.934	H10	HA	0.142	H4	HC	0.060
H10	HC	0.068	H2	H	0.424			H5	HC	0.060	
C19	CA	0.006	H3	H	0.424			H6	HC	0.060	
C20	CA	-0.105	N5	NA	-0.655	5std		H7	H1	0.098	
H16	HA	0.119	H4	H	0.429	C1	CA	-0.360	N2	N	-0.574
C21	CA	-0.179	C4	CA	0.588	H1	HA	0.240	H8	H	0.246
H17	HA	0.154	N6	NC	-0.586	C2	CA	0.336	C6	C	0.567
C22	CA	-0.088	C5	CA	0.262	F1	F	-0.140	O3	O	-0.584
H18	HA	0.138	H5	H4	0.092	C3	CA	0.316	C7	CT	0.044
C23	CA	-0.179	C6	CA	0.037	F2	F	-0.158	C8	C	0.361
H19	HA	0.154	C7	CT	-0.102	C4	CA	-0.431	N3	N	-0.140
C24	CA	-0.105	H6	H1	0.109	H2	HA	0.263	O4	OH	-0.686
H20	HA	0.119	H7	H1	0.109	C5	CA	0.086	H9	H	0.240
C13	CA	0.006	N7	NH	-0.339	C6	CA	0.060	O5	O	-0.563
C14	CA	-0.105	C8	CT	-0.077	N1	NA	-0.120	H10	HC	-0.010
H11	HA	0.119	H8	H1	0.067	H20	H	0.307	C9	CT	0.035
C15	CA	-0.179	H9	H1	0.067	C7	CA	0.099	H11	HC	0.003
H12	HA	0.154	H10	H1	0.067	H3	H4	0.191	H12	HC	0.003
C16	CA	-0.088	C9	CA	0.061	N2	NC	-0.245	C10	CA	-0.024
H13	HA	0.138	C12	CA	-0.097	C8	CA	0.308	C11	CA	-0.138
C17	CA	-0.179	H13	HA	0.124	N3	NH	-0.215	H13	HA	0.149
H14	HA	0.154	C13	CA	-0.171	H4	H	0.250	C12	CA	-0.174
C18	CA	-0.105	H14	HA	0.153	C9	CT	-0.098	H14	HA	0.137
H15	HA	0.119	C10	CA	-0.097	C10	CT	-0.042	C13	CA	-0.123
			H12	HA	0.124	H5	HC	0.039	H15	HA	0.129
			C11	CA	-0.171	H6	HC	0.039	C14	CA	-0.174
3tmm			H11	HA	0.153	H7	HC	0.039	H16	HA	0.137
C4	CT	-0.277	C14	CA	-0.014	H8	H1	0.125	C15	CA	-0.138
H5	HC	0.084	C15	C	0.434	C11	CT	-0.050	H17	HA	0.149
H6	HC	0.084	O1	O	-0.568	H14	HC	0.046			
H7	HC	0.084	N8	N	-0.211	C18	CA	0.050			
C3	CT	0.172	H15	H	0.253	C19	CA	-0.114	7dfr		
C5	CT	-0.277	C16	CT	0.001	H15	HA	0.120	N1	NC	-0.374
H8	HC	0.084	C17	C	0.779	C20	CA	-0.191	C1	CA	0.170
H9	HC	0.084	O2	O	-0.756	H16	HA	0.160	C2	C	0.472
H10	HC	0.084	O3	O	-0.756	C21	CA	-0.088	O1	O	-0.513
H4	HC	-0.007	H16	H1	0.029	H17	HA	0.145	N2	NA	-0.292
C1	CT	0.029	C18	CT	-0.031	C22	CA	-0.191	H1	H	0.326
N1	N3	-0.316	H17	HC	0.022	H18	HA	0.160	C3	CA	0.445
H1	H	0.284	H18	HC	0.022	C23	CA	-0.114	N3	NH	-0.838
H2	H	0.284	C19	CT	-0.094	H19	HA	0.120	H2	H	0.434
H11	H	0.284	H19	HC	0.004	C12	CA	0.050	H3	H	0.434
H3	HP	0.093	H20	HC	0.004	C13	CA	-0.114	N4	NA	-0.309
C2	C	0.513	C20	C	0.725	H13	HA	0.120	H18	H	0.303
O1	O	-0.577	O5	O	-0.751	C14	CA	-0.191	C4	CA	0.408
N2	N	-0.374	O4	O	-0.751	H12	HA	0.160	N5	NC	-0.490
H12	H	0.254				C15	CA	-0.088	C5	CA	0.257

## Local Minimum Conformation

H4	H4	0.108	C6	CT	0.108	C2	CA	-0.016	C2	CA	-0.176
C6	CA	0.089	C7	CT	-0.047	C11	CI	-0.132	H2	HA	0.138
C7	CT	0.004	H6	HC	0.010	C1	CA	-0.098	C3	CA	-0.159
H5	H1	0.086	H7	HC	0.010	H12	HA	0.155	H3	HA	0.123
H6	H1	0.086	H8	HC	0.010	C6	CA	-0.193	C4	CA	-0.176
N6	NH	-0.644	C8	CT	-0.047	H15	HA	0.152	H4	HA	0.138
H7	H	0.362	H9	HC	0.010	C5	CA	0.272	C5	CA	-0.198
C8	CA	0.099	H10	HC	0.010	O1	OS	-0.355	H5	HA	0.119
C11	CA	-0.152	H11	HC	0.010	C7	CA	0.259	C6	CA	0.442
H10	HA	0.148	H5	HC	0.010	C12	CA	-0.159	O1	OS	-0.572
C12	CA	-0.141	H3	HC	0.066	C11	CA	-0.163	C7	CA	0.605
H11	HA	0.143	H4	HC	0.066	H17	HA	0.178	C10	CA	-0.317
C9	CA	-0.152	H2	H1	0.106	H18	HA	0.146	H8	HA	0.179
H8	HA	0.148	C4	C	0.268	C8	CA	-0.159	C11	CA	-0.151
C10	CA	-0.141	O2	O	-0.448	H16	HA	0.146	H9	HA	0.178
H9	HA	0.143	N2	N	-0.195	C9	CA	-0.163	C8	CA	-0.317
C13	CA	0.062	H12	H	0.238	H19	HA	0.178	H7	HA	0.179
C14	C	0.353	C9	CT	0.089	C10	CA	-0.030	C9	CA	-0.151
O2	O	-0.577	C11	CT	-0.184	S1	SY	0.985	H6	HA	0.178
N7	N	-0.107	H14	HC	0.064	O2	O	-0.599	C12	CA	0.023
H12	H	0.164	H15	HC	0.064	O3	O	-0.599	S1	SY	0.765
C15	CT	0.018	H16	HC	0.064	C13	CT	-0.018	O2	O	-0.569
C16	C	0.726	H13	H1	0.080	H1	H1	0.014	O3	O	-0.569
O3	O	-0.772	C10	C	0.445	H2	H1	0.014	C13	CT	0.183
O4	O	-0.772	O3	O	-0.507	C14	CT	0.042	C14	CT	-0.281
H13	H1	0.037	N3	N	-0.177	C19	C	0.549	C15	C	0.655
C17	CT	0.109	H17	H	0.116	N1	N	-0.232	O4	O	-0.614
H14	HC	-0.012	C12	CA	0.075	O6	OH	-0.713	N1	N	-0.510
H15	HC	-0.012	C13	CA	-0.132	H11	H	0.280	O5	OH	-0.510
C18	CT	-0.332	H18	HA	0.167	O5	O	-0.665	H10	H	0.326
H16	HC	0.083	C14	CA	-0.194	C15	CT	-0.068	H11	HC	0.057
H17	HC	0.083	H19	HA	0.164	H3	HC	0.029	H12	HC	0.057
C19	C	0.740	C15	CA	-0.022	H4	HC	0.029	C16	CT	0.030
O6	O	-0.706	C18	CT	0.606	C16	CT	0.159	H13	HC	0.011
O5	O	-0.706	F4	F	-0.212	H5	H1	0.011	H14	HC	0.011
			F5	F	-0.212	H6	H1	0.011	C17	CT	0.088
			F6	F	-0.212	O4	OS	-0.436	H15	H1	0.037
7est			C16	CA	-0.194	C17	CT	0.159	H16	H1	0.037
F1	F	-0.145	H20	HA	0.164	H7	H1	0.011	O6	OS	-0.428
C2	CT	0.392	C17	CA	-0.132	H8	H1	0.011	C18	CT	0.088
F2	F	-0.145	H21	HA	0.167	C18	CT	-0.068	H17	H1	0.037
F3	F	-0.145				H9	HC	0.029	H18	H1	0.037
C1	C	0.436				H10	HC	0.029	C19	CT	0.030
O1	O	-0.495	830c						H19	HC	0.011
N1	N	-0.274	C4	CA	-0.193				H20	HC	0.011
H1	H	0.242	H14	HA	0.152	966c					
C3	CT	0.015	C3	CA	-0.098	C1	CA	-0.198			
C5	CT	-0.152	H13	HA	0.155	H1	HA	0.119			