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Supporting information, Table 1. ^1H - ^{15}N dipolar couplings in ubiquitin at 304 K, using 5% w/v bicelles (3:1 DMPC:DHPC) in 93% H_2O , 7% D_2O .

RES#	D_{NH} (Hz) ^a	RES#	D_{NH} (Hz) ^a
2	-8.7	40	2.3
3	8.6	41	8.7
4	10.2	42	5.3
5	9.9	43	7.6
6	8.5	44	7.1
7	4.1	45	4.4
8	7.7	46	6.3
10	6.4	47	8.7
11	-8.0	48	-11.1
12	7.4	49	3.9
13	6.8	50	5.0
14	9.6	51	-7.8
15	10.5	52	-17.7
16	2.1	54	-7.2
17	0.4	55	5.9
18	-10.8	56	11.7
20	-4.1	57	12.3
21	2.8	58	8.7
22	13.0	59	10.8
23	8.9	60	8.1
25	1.6	61	7.9
26	8.7	62	3.1
27	7.5	63	-12.1
28	-0.1	64	12.2
29	6.4	65	4.3
30	8.1	66	12.1
31	3.5	67	10.5
32	0.2	68	8.3
33	8.0	69	6.5
34	5.5	70	4.5
35	-13.4	71	6.7
36	-14.5	72	3.6
39	11.7		

^a Measurement error in D_{NH} is 0.15 Hz, estimated from reproducibility of duplicate measurements.

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Supporting Information, Table 2. ^{13}C 's shifts in human ubiquitin at 292, 298 and 304K, in the presence of 5% w/v bicelles (3:1 DMPC:DHPC) in 93% H_2O , 7% D_2O .

Res#	$\delta_{\text{C}'}(292)^{\text{a}}$ (ppm)	$\delta_{\text{C}'}(298)^{\text{a}}$ (ppm)	$\delta_{\text{C}'}(304)^{\text{a}}$ (ppm)	$\Delta\delta_{\text{C}'}^{\text{b}}$ (ppb)
1	170.382	170.420	170.486	28
2	175.983	175.959	175.971	36
3	172.246	172.276	172.317	11
4	175.117	175.111	175.165	60
5	174.734	174.744	174.737	-17
6	177.055	177.050	177.089	44
7	176.883	176.866	176.888	39
9	175.449	175.437	175.466	41
10	173.895	173.909	173.928	5
11	175.686	175.705	175.783	59
12	174.260	174.238	174.163	-53
13	175.087	175.106	175.171	46
14	173.661	173.657	173.605	-48
15	174.471	174.481	174.520	29
16	175.710	175.736	175.726	-36
17	173.964	173.988	174.040	28
19	175.172	175.190	175.180	-28
20	174.539	174.533	174.555	28
21	176.220	176.241	176.289	27
22	176.660	176.672	176.690	6
24	178.910	178.905	178.935	35
25	178.245	178.231	178.149	-68
26	177.833	177.850	177.929	62
27	180.438	180.425	180.368	-44
28	180.160	180.169	180.189	11
29	180.272	180.226	180.167	-13
30	178.114	178.124	178.127	-7
31	178.805	178.784	178.789	26
32	177.244	177.234	177.162	-62
33	177.776	177.774	177.819	47
34	177.846	177.848	177.874	24
35	173.851	173.860	173.865	-4
38	178.233	178.208	178.207	24
39	176.985	176.983	176.948	-33
40	175.364	175.340	175.364	48

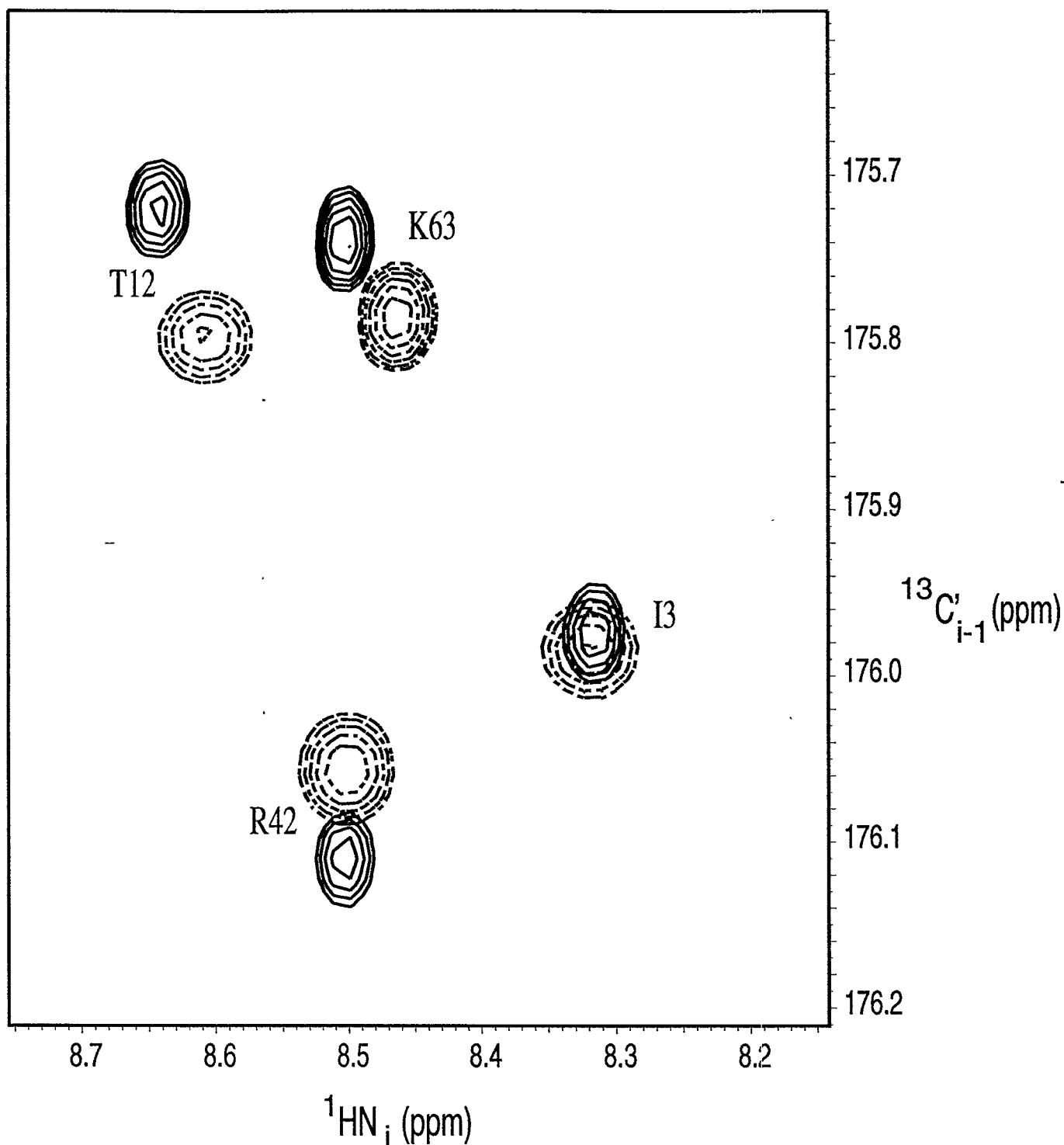
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41	176.078	176.094	176.042	-68
42	173.803	173.808	173.877	64
43	175.195	175.206	175.157	-60
44	175.823	175.785	175.796	49
45	174.499	174.489	174.407	-72
46	177.240	177.231	177.276	54
47	173.642	173.642	173.638	-4
48	174.520	174.544	174.560	-8
49	175.501	175.492	175.467	-16
50	176.568	176.564	176.546	-14
51	175.401	175.403	175.405	0
53	174.701	174.698	174.717	22
54	175.247	175.270	175.336	43
55	176.438	176.438	176.387	-51
56	180.742	180.719	180.710	14
57	178.258	178.222	178.178	-8
58	177.370	177.349	177.276	-52
59	174.600	174.605	174.662	52
60	174.208	174.199	174.147	-43
61	174.439	174.458	174.501	24
62	175.697	175.724	175.771	20
63	175.696	175.654	175.597	-15
64	175.135	175.143	175.155	4
65	171.948	171.965	172.030	48
66	173.692	173.688	173.691	7
67	175.341	175.319	175.366	69
68	173.463	173.538	173.585	-28
70	173.983	173.966	173.979	30
71	177.812	177.778	177.728	-16

^a Shifts are relative to TSP. Measurement error of C' chemical shifts ($\delta_{C'}$), based on reproducibility of duplicate experiments, is 1 ppb.

^b propagated measurement error in $\Delta\delta_{C'}$ is 2.5 ppb.

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Supporting Information, Figure 1. Overlay of small regions of the 600 MHz 2D H(N)CO spectrum of uniformly $^{13}\text{C}/^{15}\text{N}$ -enriched human ubiquitin (0.7 mM) in 93% H_2O , 7% D_2O , containing 5% w/v bicelles (3:1 DMPC:DHPC). Solid contours correspond to the isotropic spectrum at 298 K; dashed contours correspond to the liquid crystalline phase at 304 K.