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Supplemental Figures and Tables

Dynamics of GCN4 Facilitate DNA Interaction: A Model-Free Analysis of an Intrinsically Disordered Region

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Figure S1

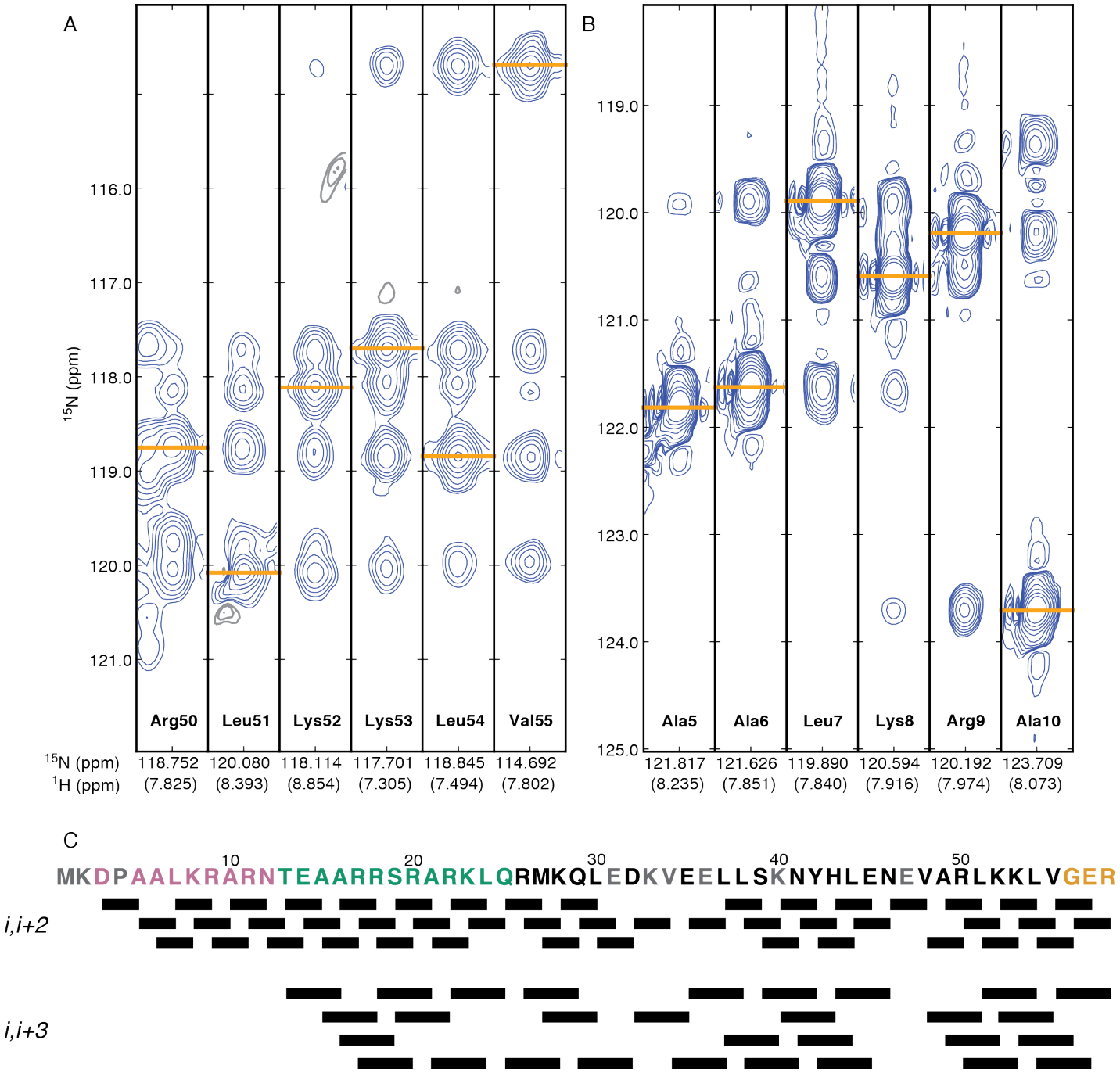

Figure S1. Representative strip plots of U-[^{15}N, ^{2}H] GCN4 (**A**) coiled-coil region and (**B**) basic region from an ^{1}H, ^{15}N, ^{15}N HSQC-NOESY-HSQC with 600 ms mixing time. NOE connectivities for i_{-3} to i_{+3} can be observed in panel A, while the connectivities in the disordered region (panel B) tends to only extend from i_{-2} to i_{+2}. Positive and negative contours are shown in blue and black, respectively. (**C**) All connectivities for i,i_{+2} and i,i_{+3} are shown. Residues are colored as described in the main text, except for those that were excluded from relaxation analysis and are shown in gray.

Figure S2

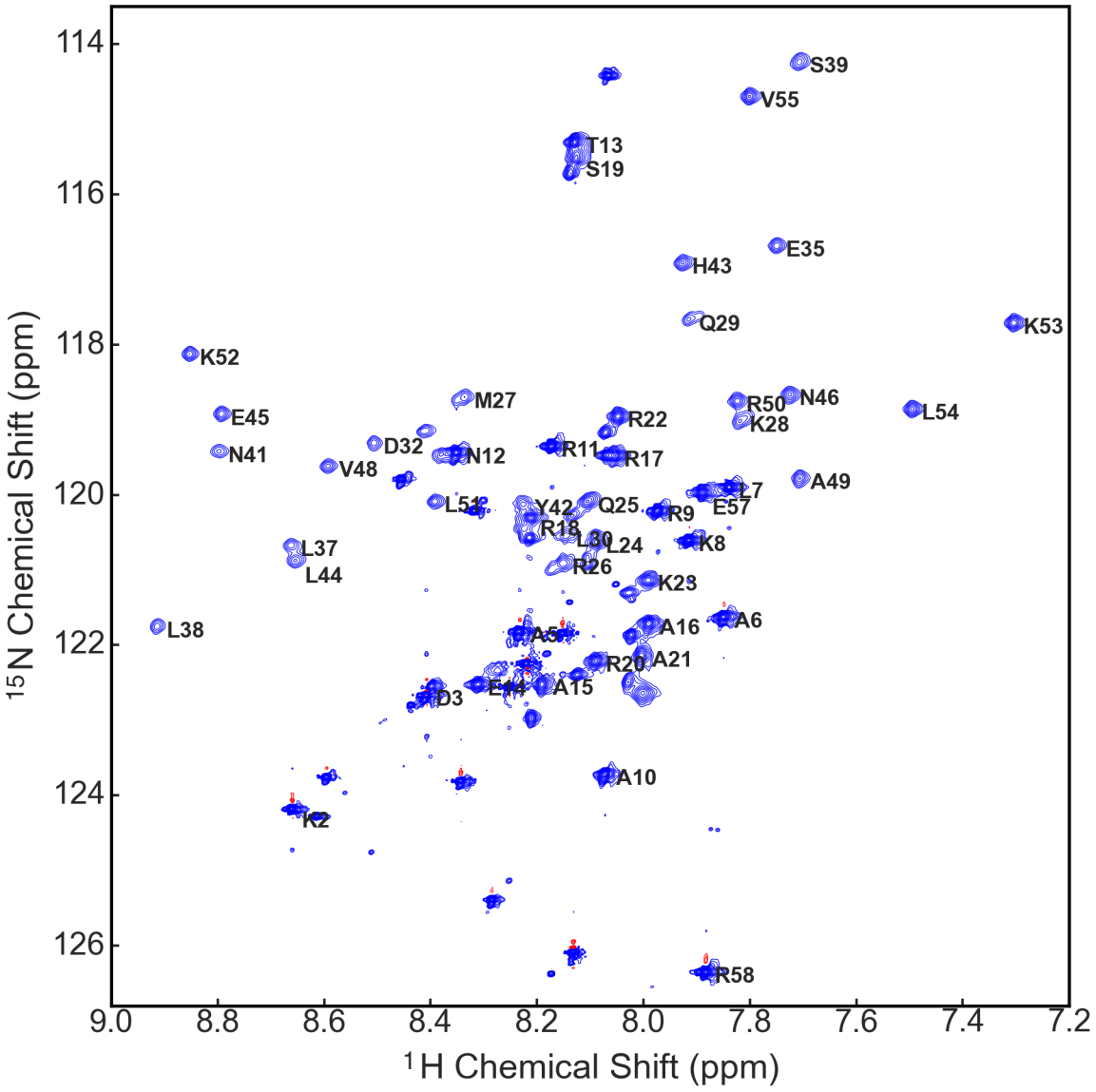

Figure S2. ^{1}H-^{15}N HSQC spectrum of U-[^{15}N, ^{2}H] GCN4. Unlabeled peaks correspond to small amounts of proteolysis during expression and purification in the basic region of GCN4.

Figure S3

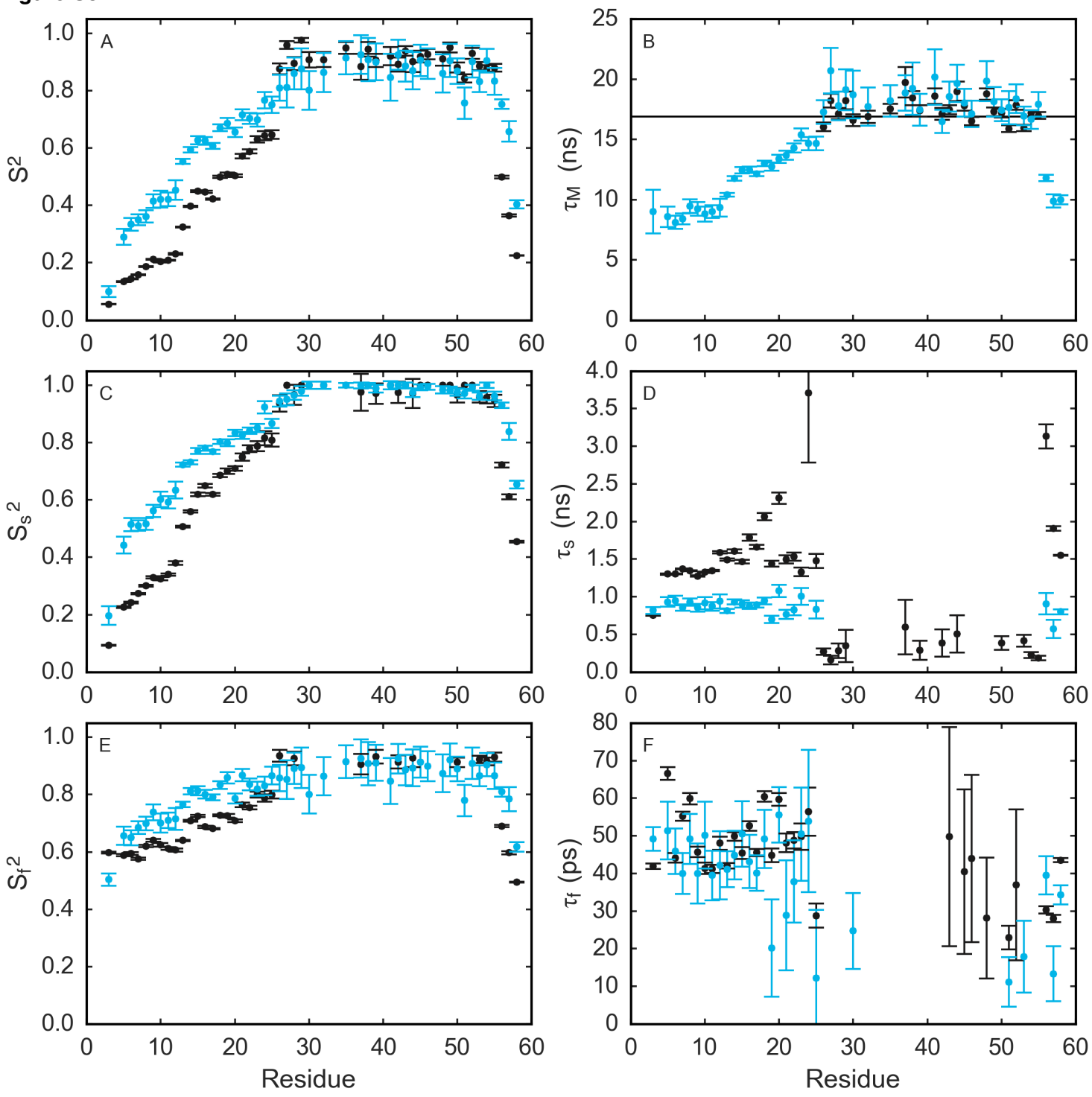

Figure S3. Comparison of Model-free parameters (**A**) S^2, (**B**) τ_M, (**C**) S_s^2, (**D**) τ_s, (**E**) S_f^2, and (**F**) τ_f determined from spectral density calculations (blue) and from analysis using the program relax with a fixed τ_M for disordered residues in the basic and C-terminal domains (black). The mean τ_M (16.9 ns) is indicated with a straight, black line.

Table S1. Time points used for measuring R_1 and R_2 relaxation rate constants of GCN4[1]

Experiment	B0 Field (T)	Time Points (s)
R_1	14.1	**0.02**, 0.06, **0.14**, 0.23, **0.34**, 0.47, 0.69, **0.98**, 1.50
	16.45	**0.02**, 0.14, **0.23**, 0.47, **0.98**, 1.50, 1.75
	18.8	**0.02**, 0.06, **0.08**, 0.14, **0.23**, 0.47, **0.98**, 1.50, 1.75
	21.1	**0.02**, 0.14, 0.23, **0.47**, **0.98**, 1.50
R_2	14.1	0.004, **0.008**, **0.024**, **0.064**, 0.096, **0.144**, 0.208
	16.45	0.004, **0.008**, 0.024, **0.064**, 0.096, **0.144**, 0.208
	18.8	0.004, **0.008**, **0.024**, **0.064**, 0.096, **0.144**, 0.208
	21.1	0.004, **0.008**, 0.024, **0.064**, 0.096, **0.144**, 0.208

[1]Time points that were collected in duplicate for error analysis are shown in bold.

Table S2. Amide chemical shifts for U-[^{15}N, ^{2}H] GCN4

Residue		^{1}H (ppm)	^{15}N (ppm)	Residue		^{1}H (ppm)	^{15}N (ppm)
1	M			**30**	L	8.14	120.5
2	K			**31**	E		
3	D	8.40	122.6	**32**	D	8.51	119.3
4	P			**33**	K		
5	A	8.23	121.8	**34**	V		
6	A	7.85	121.6	**35**	E	7.75	116.7
7	L	7.84	119.9	**36**	E		
8	K	7.92	120.6	**37**	L	8.66	120.7
9	R	7.97	120.2	**38**	L	8.91	121.7
10	A	8.07	123.7	**39**	S	7.71	114.2
11	R	8.17	119.3	**40**	K		
12	N	8.35	119.4	**41**	N	8.80	119.4
13	T	8.13	115.3	**42**	Y	8.22	120.1
14	E	8.31	122.5	**43**	H	7.93	116.9
15	A	8.19	122.5	**44**	L	8.65	120.9
16	A	7.99	121.7	**45**	E	8.79	118.9
17	R	8.06	119.5	**46**	N	7.72	118.7
18	R	8.21	120.3	**47**	E		
19	S	8.13	115.5	**48**	V	8.59	119.6
20	R	8.09	122.2	**49**	A	7.71	119.8
21	A	8.05	122.2	**50**	R	7.82	118.8
22	R	8.02	120.7	**51**	L	8.39	120.1
23	K	8.02	119.9	**52**	K	8.85	118.1
24	L	8.09	120.6	**53**	K	7.30	117.7
25	Q	8.10	120.1	**54**	L	7.49	118.9
26	R	8.15	120.9	**55**	V	7.80	114.7
27	M	8.33	118.7	**56**	G	7.79	108.5
28	K	7.82	119.0	**57**	E	7.89	120.0
29	Q	7.92	117.7	**58**	R	7.88	126.3

[1]Resonance assignments were determined from a ^{1}H, ^{15}N, ^{15}N HSQC-NOESY-HSQC with 600 ms mixing time.

Table S3. Relaxation parameters determined for GCN4 at 300 K[1]

Residue	14.1 T			16.45 T		
	R_1 (s^{-1})	R_2 (s^{-1})	NOE	R_1 (s^{-1})	R_2 (s^{-1})	NOE
3	1.11 ± 0.02	3.05 ± 0.38	-0.76 ± 0.01	1.07 ± 0.03	1.48 ± 0.11	-0.41 ± 0.01
5	1.38 ± 0.05	4.97 ± 0.84	-0.14 ± 0.01	1.35 ± 0.07	5.84 ± 0.31	0.06 ± 0.01
6	1.39 ± 0.04	5.80 ± 1.15	-0.01 ± 0.01	1.27 ± 0.07	6.02 ± 0.33	0.13 ± 0.01
7	1.37 ± 0.03	6.01 ± 0.97	-0.05 ± 0.01	1.32 ± 0.07	5.72 ± 0.29	0.10 ± 0.01
8	1.38 ± 0.03	6.09 ± 1.07	-0.03 ± 0.01	1.31 ± 0.07	8.34 ± 0.37	0.11 ± 0.01
9	1.39 ± 0.04	6.69 ± 1.23	0.02 ± 0.01	1.33 ± 0.09	7.58 ± 0.38	0.17 ± 0.01
10	1.39 ± 0.05	7.05 ± 1.56	0.06 ± 0.01	1.25 ± 0.10	7.50 ± 0.52	0.18 ± 0.01
11	1.36 ± 0.04	7.02 ± 1.30	0.06 ± 0.01	1.25 ± 0.08	7.54 ± 0.40	0.19 ± 0.01
12	1.36 ± 0.06	7.66 ± 2.04	0.14 ± 0.01	1.26 ± 0.11	7.75 ± 0.61	0.32 ± 0.01
13	1.27 ± 0.01	9.96 ± 0.29	0.18 ± 0.01	1.18 ± 0.03	10.26 ± 0.24	0.26 ± 0.01
14	1.28 ± 0.01	10.75 ± 0.33	0.26 ± 0.01	1.12 ± 0.04	12.00 ± 0.32	0.42 ± 0.01
15	1.20 ± 0.02	12.48 ± 0.54	0.27 ± 0.01	1.10 ± 0.05	12.39 ± 0.47	0.26 ± 0.01
16	1.17 ± 0.01	12.72 ± 0.55	0.27 ± 0.01	0.99 ± 0.04	14.19 ± 0.50	0.36 ± 0.01
17	1.18 ± 0.01	11.27 ± 0.33	0.27 ± 0.01	1.06 ± 0.02	12.20 ± 0.27	0.35 ± 0.01
18	1.18 ± 0.01	13.45 ± 0.53	0.34 ± 0.01	1.01 ± 0.03	14.61 ± 0.47	0.43 ± 0.01
19	1.14 ± 0.02	13.95 ± 0.87	0.28 ± 0.01	0.98 ± 0.06	14.68 ± 0.73	0.36 ± 0.02
20	1.10 ± 0.02	13.53 ± 0.67	0.35 ± 0.01	1.12 ± 0.05	12.94 ± 0.46	0.29 ± 0.01
21	1.09 ± 0.02	14.66 ± 1.09	0.34 ± 0.01	1.06 ± 0.08	15.45 ± 0.94	0.42 ± 0.02
22	1.04 ± 0.02	15.11 ± 1.08	0.35 ± 0.01	0.96 ± 0.06	16.94 ± 0.87	0.38 ± 0.02
23	1.01 ± 0.02	16.26 ± 1.27	0.36 ± 0.01	0.94 ± 0.07	19.13 ± 1.30	0.43 ± 0.02
24	1.01 ± 0.03	16.50 ± 1.96	0.52 ± 0.01	0.86 ± 0.09	18.84 ± 1.77	0.53 ± 0.03
25	1.01 ± 0.03	15.74 ± 1.85	0.49 ± 0.01	0.87 ± 0.09	17.97 ± 1.63	0.52 ± 0.03
26	0.82 ± 0.04	19.83 ± 2.78	0.58 ± 0.01	0.77 ± 0.09	22.63 ± 2.48	0.40 ± 0.03
27	0.71 ± 0.05	23.08 ± 4.40	0.68 ± 0.01	0.62 ± 0.09	28.91 ± 4.47	0.67 ± 0.03
28	0.77 ± 0.05	21.53 ± 3.67	0.69 ± 0.01	0.67 ± 0.07	24.54 ± 2.52	0.74 ± 0.03
29	0.75 ± 0.06	23.27 ± 5.89	0.72 ± 0.01	0.60 ± 0.12	27.36 ± 5.67	0.77 ± 0.04

30	0.75 ± 0.06	19.95 ± 3.30	0.80 ± 0.01	0.63 ± 0.07	23.50 ± 2.22	0.72 ± 0.02
32	0.76 ± 0.07	22.55 ± 3.82	0.78 ± 0.01	0.63 ± 0.07	25.54 ± 2.90	0.83 ± 0.02
35	0.75 ± 0.06	23.96 ± 3.43	0.78 ± 0.01	0.64 ± 0.05	26.17 ± 1.99	0.80 ± 0.02
37	0.69 ± 0.06	25.06 ± 4.19	0.74 ± 0.01	0.61 ± 0.06	29.23 ± 3.15	0.78 ± 0.02
38	0.73 ± 0.07	24.45 ± 4.07	0.86 ± 0.01	0.64 ± 0.06	26.73 ± 2.61	0.75 ± 0.02
39	0.77 ± 0.06	22.04 ± 3.40	0.71 ± 0.01	0.69 ± 0.06	24.83 ± 2.30	0.71 ± 0.02
41	0.69 ± 0.07	27.21 ± 5.27	0.80 ± 0.01	0.58 ± 0.07	27.47 ± 3.12	0.85 ± 0.03
42	0.78 ± 0.05	20.88 ± 2.58	0.73 ± 0.01	0.72 ± 0.06	22.46 ± 1.72	0.75 ± 0.02
43	0.75 ± 0.05	23.21 ± 2.98	0.77 ± 0.01	0.66 ± 0.05	25.80 ± 1.79	0.74 ± 0.02
44	0.70 ± 0.06	24.40 ± 3.37	0.72 ± 0.01	0.61 ± 0.05	28.37 ± 2.67	0.77 ± 0.02
45	0.73 ± 0.05	25.51 ± 3.26	0.72 ± 0.01	0.68 ± 0.05	26.32 ± 1.90	0.77 ± 0.02
46	0.78 ± 0.06	22.15 ± 2.76	0.75 ± 0.01	0.71 ± 0.05	24.22 ± 1.69	0.75 ± 0.02
48	0.68 ± 0.06	23.91 ± 3.37	0.76 ± 0.01	0.60 ± 0.05	26.94 ± 2.38	0.71 ± 0.02
49	0.77 ± 0.06	23.39 ± 2.95	0.75 ± 0.01	0.69 ± 0.05	25.44 ± 1.96	0.73 ± 0.02
50	0.76 ± 0.05	22.68 ± 2.33	0.69 ± 0.01	0.66 ± 0.04	24.53 ± 1.52	0.74 ± 0.01
51	0.74 ± 0.06	21.50 ± 2.04	0.74 ± 0.01	0.59 ± 0.05	22.85 ± 1.55	0.76 ± 0.02
52	0.75 ± 0.06	23.70 ± 2.73	0.74 ± 0.01	0.62 ± 0.05	25.92 ± 1.71	0.78 ± 0.01
53	0.82 ± 0.04	20.12 ± 1.67	0.68 ± 0.01	0.69 ± 0.03	22.32 ± 0.97	0.70 ± 0.01
54	0.73 ± 0.04	22.90 ± 2.12	0.65 ± 0.01	0.76 ± 0.04	24.13 ± 1.36	0.65 ± 0.01
55	0.74 ± 0.05	21.63 ± 2.08	0.63 ± 0.01	0.68 ± 0.04	22.34 ± 1.23	0.61 ± 0.01
56	1.04 ± 0.02	13.71 ± 0.52	0.54 ± 0.01	1.03 ± 0.02	14.69 ± 0.29	0.56 ± 0.01
57	1.13 ± 0.07	10.12 ± 2.17	0.36 ± 0.01	1.10 ± 0.05	11.33 ± 0.44	0.42 ± 0.01
58	1.10 ± 0.03	6.74 ± 0.53	-0.01 ± 0.01	0.99 ± 0.02	6.31 ± 0.10	0.08 ± 0.01

[1] R_1 and R_2 spin relaxation rates at 16.45 T are adjusted for temperature as noted in the text.

Table S3 (continued)

Residue	18.8 T			21.1 T		
	R_1 (s^{-1})	R_2 (s^{-1})	NOE	R_1 (s^{-1})	R_2 (s^{-1})	NOE
3	1.09 ± 0.07	3.59 ± 0.04	-0.18 ± 0.01	1.18 ± 0.01	2.16 ± 0.07	-0.02 ± 0.01
5	1.24 ± 0.14	6.91 ± 0.11	0.14 ± 0.01	1.34 ± 0.01	5.92 ± 0.04	0.29 ± 0.01
6	1.25 ± 0.16	6.20 ± 0.13	0.27 ± 0.01	1.28 ± 0.02	6.33 ± 0.05	0.33 ± 0.01
7	1.26 ± 0.13	7.42 ± 0.12	0.20 ± 0.01	1.25 ± 0.01	6.70 ± 0.04	0.34 ± 0.01
8	1.27 ± 0.15	7.40 ± 0.13	0.22 ± 0.01	1.29 ± 0.01	7.71 ± 0.05	0.35 ± 0.01
9	1.22 ± 0.17	8.12 ± 0.16	0.29 ± 0.01	1.24 ± 0.02	8.41 ± 0.06	0.39 ± 0.01
10	1.26 ± 0.22	8.46 ± 0.22	0.32 ± 0.01	1.22 ± 0.02	8.09 ± 0.08	0.35 ± 0.01
11	1.24 ± 0.18	8.28 ± 0.15	0.31 ± 0.01	1.19 ± 0.01	8.22 ± 0.06	0.39 ± 0.01
12	1.13 ± 0.22	8.97 ± 0.23	0.32 ± 0.01	1.18 ± 0.02	9.04 ± 0.09	0.42 ± 0.01
13	1.10 ± 0.04	11.00 ± 0.08	0.35 ± 0.01	1.02 ± 0.01	11.71 ± 0.06	0.42 ± 0.02
14	1.04 ± 0.05	13.18 ± 0.13	0.40 ± 0.01	1.07 ± 0.01	14.13 ± 0.09	0.48 ± 0.02
15	1.00 ± 0.07	14.92 ± 0.20	0.41 ± 0.01	0.98 ± 0.01	15.47 ± 0.13	0.47 ± 0.02
16	0.98 ± 0.06	14.61 ± 0.22	0.36 ± 0.01	0.94 ± 0.01	15.41 ± 0.13	0.47 ± 0.02
17	1.07 ± 0.04	13.89 ± 0.14	0.38 ± 0.01	0.95 ± 0.01	14.73 ± 0.09	0.49 ± 0.01
18	0.91 ± 0.05	16.16 ± 0.20	0.39 ± 0.01	0.94 ± 0.01	17.23 ± 0.14	0.50 ± 0.02
19	0.99 ± 0.07	16.54 ± 0.33	0.39 ± 0.01	0.85 ± 0.01	17.03 ± 0.21	0.56 ± 0.03
20	0.96 ± 0.05	16.57 ± 0.26	0.37 ± 0.01	0.89 ± 0.01	17.39 ± 0.18	0.49 ± 0.02
21	0.89 ± 0.09	18.14 ± 0.44	0.43 ± 0.01	0.82 ± 0.01	19.13 ± 0.29	0.57 ± 0.03
22	0.81 ± 0.07	18.94 ± 0.39	0.41 ± 0.01	0.79 ± 0.01	19.39 ± 0.25	0.52 ± 0.03
23	0.83 ± 0.09	19.29 ± 0.55	0.44 ± 0.01	0.80 ± 0.01	20.93 ± 0.40	0.48 ± 0.03
24	0.84 ± 0.16	20.88 ± 0.81	0.49 ± 0.01	0.74 ± 0.02	21.54 ± 0.55	0.55 ± 0.05
25	0.80 ± 0.12	20.06 ± 0.79	0.57 ± 0.01	0.74 ± 0.02	21.32 ± 0.59	0.69 ± 0.05
26	0.68 ± 0.12	27.08 ± 1.53	0.60 ± 0.01	0.56 ± 0.02	26.10 ± 1.01	0.68 ± 0.06
27	0.62 ± 0.14	29.90 ± 2.37	0.67 ± 0.01	0.51 ± 0.03	31.83 ± 2.04	0.77 ± 0.06
28	0.62 ± 0.08	27.40 ± 1.94	0.70 ± 0.01	0.49 ± 0.02	29.19 ± 1.43	0.80 ± 0.04

Residue	18.8 T			21.1 T		
	R_1 (s^{-1})	R_2 (s^{-1})	NOE	R_1 (s^{-1})	R_2 (s^{-1})	NOE
29	0.57 ± 0.14	29.82 ± 2.92	0.76 ± 0.01	0.49 ± 0.03	31.86 ± 2.30	0.72 ± 0.06
30	0.59 ± 0.09	28.01 ± 2.33	0.80 ± 0.01	0.52 ± 0.03	28.66 ± 1.64	0.71 ± 0.04
32	0.59 ± 0.08	27.60 ± 2.09	0.78 ± 0.01	0.49 ± 0.03	28.80 ± 1.47	0.78 ± 0.03
35	0.61 ± 0.05	30.14 ± 1.68	0.84 ± 0.01	0.48 ± 0.02	31.46 ± 1.33	0.67 ± 0.03
37	0.54 ± 0.07	32.60 ± 2.59	0.80 ± 0.01	0.41 ± 0.03	32.06 ± 1.80	0.74 ± 0.03
38	0.54 ± 0.08	31.31 ± 2.55	0.66 ± 0.02	0.47 ± 0.03	33.63 ± 1.89	0.84 ± 0.04
39	0.58 ± 0.06	27.78 ± 1.66	0.73 ± 0.01	0.48 ± 0.02	30.13 ± 1.39	0.73 ± 0.03
41	0.56 ± 0.10	32.03 ± 3.14	0.74 ± 0.02	0.46 ± 0.03	31.65 ± 1.99	0.81 ± 0.05
42	0.64 ± 0.07	27.32 ± 1.56	0.76 ± 0.01	0.46 ± 0.02	29.93 ± 1.30	0.81 ± 0.03
43	0.62 ± 0.05	27.94 ± 1.50	0.72 ± 0.01	0.50 ± 0.02	32.34 ± 1.26	0.76 ± 0.03
44	0.55 ± 0.07	31.77 ± 2.56	0.76 ± 0.01	0.46 ± 0.03	31.86 ± 1.56	0.78 ± 0.03
45	0.57 ± 0.06	29.53 ± 1.93	0.70 ± 0.01	0.46 ± 0.02	30.57 ± 1.34	0.76 ± 0.03
46	0.62 ± 0.05	26.86 ± 1.38	0.72 ± 0.01	0.51 ± 0.02	29.44 ± 1.07	0.79 ± 0.03
48	0.53 ± 0.06	29.54 ± 2.06	0.74 ± 0.01	0.44 ± 0.02	33.06 ± 1.51	0.79 ± 0.03
49	0.58 ± 0.05	30.17 ± 1.56	0.73 ± 0.01	0.50 ± 0.02	30.91 ± 1.27	0.79 ± 0.02
50	0.59 ± 0.04	26.73 ± 1.20	0.72 ± 0.01	0.48 ± 0.01	28.73 ± 0.89	0.75 ± 0.02
51	0.58 ± 0.05	23.31 ± 0.76	0.68 ± 0.01	0.50 ± 0.02	25.49 ± 0.58	0.80 ± 0.03
52	0.61 ± 0.06	28.16 ± 1.71	0.75 ± 0.01	0.47 ± 0.02	32.43 ± 1.33	0.77 ± 0.02
53	0.61 ± 0.03	24.76 ± 0.77	0.72 ± 0.01	0.55 ± 0.01	27.28 ± 0.67	0.72 ± 0.02
54	0.59 ± 0.04	27.07 ± 0.92	0.66 ± 0.01	0.47 ± 0.01	28.20 ± 0.82	0.65 ± 0.02
55	0.59 ± 0.04	26.59 ± 1.07	0.61 ± 0.01	0.50 ± 0.02	29.02 ± 0.84	0.69 ± 0.02
56	0.90 ± 0.02	16.14 ± 0.26	0.55 ± 0.01	0.74 ± 0.01	17.18 ± 0.18	0.59 ± 0.01
57	0.94 ± 0.07	12.25 ± 0.36	0.44 ± 0.01	0.83 ± 0.02	12.85 ± 0.14	0.53 ± 0.01
58	0.96 ± 0.03	9.37 ± 0.11	0.14 ± 0.01	0.93 ± 0.01	8.46 ± 0.03	0.26 ± 0.01

Table S4. Model-free parameters for GCN4 determined using the program *relax*[1]

Residue	Model	χ^2	τ_M (ns)	S^2	τ_f (ps)	S_f^2	τ_s (ns)	S_s^2 (S^2/S_f^2)
3	6	588.33		0.06 ± 0.01	41.93 ± 0.70	0.60 ± 0.01	0.75 ± 0.01	0.09 ± 0.01
5	6	268.30		0.13 ± 0.01	66.59 ± 1.71	0.59 ± 0.01	1.30 ± 0.01	0.23 ± 0.01
6	6	30.69		0.14 ± 0.01	44.14 ± 1.24	0.60 ± 0.01	1.30 ± 0.01	0.24 ± 0.01
7	6	171.52		0.16 ± 0.01	55.22 ± 1.24	0.58 ± 0.01	1.37 ± 0.01	0.27 ± 0.01
8	6	54.33		0.19 ± 0.01	59.86 ± 1.54	0.62 ± 0.01	1.35 ± 0.01	0.30 ± 0.01
9	6	30.64		0.21 ± 0.01	45.71 ± 1.40	0.64 ± 0.01	1.28 ± 0.01	0.33 ± 0.01
10	6	50.12		0.20 ± 0.01	41.34 ± 1.48	0.62 ± 0.01	1.33 ± 0.01	0.33 ± 0.01
11	6	35.97		0.21 ± 0.01	41.21 ± 1.10	0.61 ± 0.01	1.35 ± 0.01	0.34 ± 0.01
12	6	122.29		0.23 ± 0.01	48.03 ± 1.75	0.61 ± 0.01	1.59 ± 0.01	0.38 ± 0.01
13	6	189.80		0.32 ± 0.01	41.98 ± 0.73	0.64 ± 0.01	1.49 ± 0.01	0.51 ± 0.01
14	6	74.95		0.40 ± 0.01	49.84 ± 1.16	0.71 ± 0.01	1.60 ± 0.02	0.56 ± 0.01
15	6	68.07		0.45 ± 0.01	45.37 ± 1.56	0.72 ± 0.01	1.47 ± 0.03	0.62 ± 0.01
16	6	55.95		0.45 ± 0.01	52.62 ± 1.25	0.69 ± 0.01	1.79 ± 0.04	0.65 ± 0.01
17	6	69.38		0.42 ± 0.01	45.51 ± 0.95	0.68 ± 0.01	1.66 ± 0.03	0.62 ± 0.01
18	6	59.28		0.50 ± 0.01	60.45 ± 1.43	0.73 ± 0.01	2.06 ± 0.05	0.69 ± 0.01
19	6	59.24		0.51 ± 0.01	44.81 ± 1.84	0.73 ± 0.01	1.44 ± 0.04	0.70 ± 0.01
20	6	76.92		0.50 ± 0.01	59.67 ± 1.65	0.71 ± 0.01	2.31 ± 0.07	0.71 ± 0.01
21	6	30.72		0.57 ± 0.01	48.09 ± 2.48	0.76 ± 0.01	1.50 ± 0.05	0.75 ± 0.01
22	6	26.61		0.59 ± 0.01	48.77 ± 2.17	0.76 ± 0.01	1.53 ± 0.06	0.78 ± 0.01
23	6	3.34		0.63 ± 0.01	49.78 ± 3.48	0.80 ± 0.01	1.33 ± 0.06	0.79 ± 0.02
24	6	6.39		0.64 ± 0.02	56.41 ± 6.37	0.79 ± 0.01	3.71 ± 0.93	0.82 ± 0.02
25	6	6.77		0.65 ± 0.01	28.78 ± 3.17	0.80 ± 0.01	1.48 ± 0.09	0.81 ± 0.02
26	5	60.71	16.04 ± 0.36	0.88 ± 0.02		0.94 ± 0.02	0.27 ± 0.04	0.94 ± 0.03
27	2	9.87	18.21 ± 0.56	0.96 ± 0.01			0.16 ± 0.06	
28	5	15.94	17.13 ± 0.47	0.90 ± 0.02		0.93 ± 0.02	0.28 ± 0.10	0.97 ± 0.03
29	2	4.43	18.22 ± 0.74	0.98 ± 0.01			0.35 ± 0.21	
30	2	66.30	16.59 ± 0.49	0.91 ± 0.03	22.51 ± 28.86			

Residue	Model	χ^2	τ_M (ns)	S^2	τ_f (ps)	S_f^2	τ_s (ns)	S_s^2 (S^2/S_f^2)
32	2	3.05	16.89 ± 0.50	0.91 ± 0.03	19.37 ± 27.00			
35	2	48.38	17.55 ± 0.39	0.95 ± 0.02	28.02 ± 45.44			
37	5	9.60	19.74 ± 1.26	0.88 ± 0.05		0.91 ± 0.04	0.59 ± 0.36	0.98 ± 0.06
38	2	102.63	18.43 ± 0.58	0.94 ± 0.03	30.83 ± 83.09			
39	5	1.34	17.37 ± 0.48	0.91 ± 0.02		0.93 ± 0.02	0.29 ± 0.13	0.97 ± 0.04
41	2	11.34	18.60 ± 0.65	0.92 ± 0.03	21.42 ± 57.64			
42	5	9.45	17.12 ± 0.49	0.89 ± 0.03		0.91 ± 0.02	0.39 ± 0.18	0.98 ± 0.04
43	2	15.37	17.47 ± 0.39	0.94 ± 0.02	49.78 ± 29.10			
44	5	3.10	18.98 ± 0.81	0.90 ± 0.04		0.93 ± 0.03	0.50 ± 0.25	0.97 ± 0.05
45	2	23.27	17.82 ± 0.42	0.92 ± 0.02	40.50 ± 21.86			
46	2	11.43	16.52 ± 0.33	0.93 ± 0.02	43.96 ± 22.27			
48	2	7.37	18.78 ± 0.47	0.91 ± 0.02	28.12 ± 16.06			
49	2	15.65	17.30 ± 0.36	0.95 ± 0.02	58.11 ± 43.61			
50	5	5.26	17.18 ± 0.35	0.88 ± 0.02		0.91 ± 0.02	0.38 ± 0.09	0.97 ± 0.03
51	2	23.44	15.88 ± 0.28	0.84 ± 0.01	22.90 ± 3.15			
52	2	8.56	17.85 ± 0.40	0.93 ± 0.02	36.95 ± 20.08			
53	5	8.18	15.95 ± 0.26	0.89 ± 0.01		0.92 ± 0.01	0.41 ± 0.08	0.96 ± 0.02
54	5	26.87	17.19 ± 0.26	0.88 ± 0.01		0.92 ± 0.01	0.23 ± 0.04	0.96 ± 0.02
55	5	15.15	16.99 ± 0.29	0.88 ± 0.01		0.93 ± 0.02	0.18 ± 0.03	0.95 ± 0.02
56	6	55.91		0.50 ± 0.01	30.34 ± 0.99	0.69 ± 0.01	3.13 ± 0.16	0.72 ± 0.01
57	6	102.05		0.36 ± 0.01	28.05 ± 0.99	0.60 ± 0.01	1.91 ± 0.03	0.61 ± 0.01
58	6	598.91		0.22 ± 0.01	43.53 ± 0.54	0.49 ± 0.01	1.55 ± 0.01	0.45 ± 0.01

[1]Relaxation data were analyzed with a fixed τ_M for the basic and disordered C-terminal regions. Input data were from R_1, R_2, and $\{^1H\}$-^{15}N heteronuclear NOE rate constants determined at 14.1, 16.45, 18.8, and 21.1 T.