TABLE S1: Rate constants and amplitudes for H/D exchange into selected peptides[a].

Peptide		Total # exchangeable amide H	# H Fast exchanged at k>4 min^{-1}, [b]	Fast exchange, % of total	A_1 (D)	k_1 (min^{-1})	A_2 (D)	k_2 (min^{-1})
9-18	mGα	9	1.5	16.9	1.28 ± 0.08	0.86 ± 0.13	6.26 ± 0.05	0.04 ± 0.005
9-18	Gα	9	2.7	29.9	2.05 ± 0.22	0.81 ± 0.21	4.46 ± 0.16	0.005 ± 0.002
24-34	mGα	10	4.8	47.5	4.64 ± 0.27	1.42 ± 0.18	1.20 ± 0.14	0.03± 0.01
24-34	Gα	10	5.6	56.0	3.25 ± 0.25	1.33 ± 0.23	1.51 ± 0.19	0.05 ± 0.01
37-52	mGα	15	3.3	22.3	3.98 ± 0.78	2.61 ± 0.68	8.65 ± 0.13	0.004± 0.001
37-52	Gα	15	0.3	2.0	3.83 ± 2.15	2.93 ± 1.08	11.84 ± 0.09	00065 ± 0.0005
55-80	mGα	25	9.9	39.5	3.92 ± 0.37	0.28 ± 0.05	10.94 ± 0.40	0.005 ± 0.001
55-80	Gα	25	9.6	38.5	2.72 ± 0.88	0.35 ± 0.16	12.47 ± 0.96	0.0137 ± 0.005
83-91	mGα	8	3.2	39.8	1.00 ± 0.16	0.74 ± 0.29	0.87 ± 0.14	0.017 ± 0.01
83-91	Gα	8	3.9	48.8	1.07 ± 0.05	0.02 ± 0.01		
92-103	mGα	11	5.5	49.6	4.11 ± 0.60	1.54 ± 0.47	1.82 ± 0.42	0.07 ± 0.03
92-103	Gα	11	6.9	62.6	3.22 ± 0.39	1.04 ± 0.30	2.17 ± 0.30	0.03 ± 0.01
107-110	mGα	3	0.4	13.0	2.85 ± 0.17	0.84 ± 0.09		
107-110	Gα	3	1.0	34.0	2.18 ± 0.03	0.96 ± 0.02		
111-123*	mGα	18	14.9	82.8	3.58 ± 0.30	1.17 ± 0.16		
111-123*	Gα	18	17.0	94.5	1.17 ± 0.13	0.77 ± 0.17		
124-139	mGα	15	1.5	9.7	1.97 ± 0.39	1.76 ± 0.56	11.88 ± 0.12	0.004 ± 0.0006
124-139	Gα	15	1.5	9.7	1.32 ± 0.17	3.65 ± 0.50	12.60 ± 0.18	0.005 ± 0.0001
140-153	mGα	13	2.0	15.2	5.35 ± 0.57	1.26 ± 0.28	6.23 ± 0.38	0.04 ± 0.006
140-153	Gα	13	3.2	24.2	3.61 ± 0.95	2.18 ± 0.89	6.95 ± 0.23	0.013± 0.002
154-159	mGα	5	0.0	0.0	2.18 ± 0.12	0.80 ± 0.14	3.06 ± 0.09	0.005 + 0.001
154-159	Gα	5	0.6	11.2	1.80 ± 0.07	0.79 ± 0.08	2.73 ± 0.06	0.06 ± 0.01
159-172	mGα	11	5.6	50.8	2.67 ± 0.19	0.91 ± 0.15	2.80 ± 0.13	0.002 ± 0.0002
159-172	Gα	11	4.5	40.8	2.71 ± 0.14	1.65 ± 0.15	3.70 ± 0.05	0.005 + 0.0009
177-192	mGα	15	4.6	30.5	5.87 ± 1.44	1.37 ± 0.75	5.25 ± 1.31	0.10 ± 0.03
177-192	Gα	15	4.7	31.5	3.29 ± 0.29	0.49 ± 0.11	7.08 ± 0.31	0.012 ± 0.002
196-208	mGα	12	0.8	6.6	2.88 ± 0.37	2.04 ± 0.41	8.80 ± 0.11	0.006 ± 0.0007
196-208	Gα	12	1.6	13.0	0.86 ± 0.46	2.39 ± 1.53	9.78 ± 0.09	0.006 ± 0.0006
199-214	mGα	15	4.3	28.9	9.30 ± 0.79	2.25 ± 0.30	3.35 ± 0.22	0.044± 0.007
199-214	Gα	15	7.9	52.9	4.72 ± 0.95	1.20 ± 0.56	2.89 ± 0.85	0.07 ± 0.003
209-222	mGα	13	6.9	52.8	4.94 ± 0.31	1.80 ± 0.21	1.83 ± 0.14	0.017± 0.005
209-222	Gα	13	8.3	63.8	2.33 ± 0.17	0.95 ± 0.16	1.99 ± 0.16	0.05 ± 0.007
225-227	mGα	2	0.7	33.5	1.30 ± 0.06	1.54 ± 0.09		
225-227	Gα	2	1.0	50.0	0.93 ± 0.13	1.46 ± 0.31		
232-234	mGα	2	0.5	23.5	0.80 ± 0.11	0.73 ± 0.23	0.77 ± 0.11	0.03 ± 0.008
232-234	Gα	2	0.1	7.0	1.89 ± 0.04	0.09 ± 0.01		
241-249	mGα	8	0.5	5.6	1.51 ± 0.23	0.86 ± 0.33	6.07 ± 0.18	0.01 ± 0.002
241-249	Gα	8	0.1	1.3	1.18 ± 0.23	0.93 ± 0.40	6.81 ± 0.17	0.10 ± 0.00156
250-258	mGα	8	3.7	45.9	2.05 ± 0.24	1.46 ± 0.32	2.52 ± 0.11	0.0138 ± 0.0029
250-258	Gα	8	4.6	57.8	1.33 ± 0.13	0.52 ± 0.12	2.09 ± 0.13	0.009 ± 0.003
267-274	mGα	7	0.5	6.6	2.01 ± 0.28	1.98 ± 0.42	4.87 ± 0.08	0.0026+ 0.001
267-274	Gα	7	1.0	13.6	1.46 ± 0.14	0.80 ± 0.20	4.71 ± 0.10	0.0005 ± 0.0001
274-287	mGα	12	2.8	23.3	4.12 ± 0.62	1.34 ± 0.43	5.64 ± 0.41	0.04 ± 0.007
274-287	Gα	12	4.3	35.5	6.83 ± 0.17	0.13 ± 0.01		
307-318	mGα	11	1.4	12.9	5.80 ± 0.36	1.14 ± 0.01	4.30 ± 0.19	0.004 ± 0.002
307-318	Gα	11	4.4	39.8	4.45 ± 0.37	1.88 ± 0.25	2.79 ± 0.12	0.005 ± 0.002
308-323	mGα	15	4.4	29.5	8.62 ± 0.46	1.96 ± 0.18	3.47 ± 0.22	0.064 ± 0.008
308-323	Gα	15	6.4	42.7	5.30 ± 0.26	1.30 ± 0.12	3.90 ± 0.15	0.03 ± 0.003
322-330	mGα	8	0.7	9.3	2.29 ± 0.23	0.93 ± 0.22	5.16 ± 0.16	0.006 ± 0.001
322-330	Gα	8	0.9	11.0	3.43 ± 0.63	1.92 ± 0.59	3.33 ± 0.24	0.04 ± 0.007
334-336	mGα	2	0.1	5.0	0.84 ± 0.17	1.27 ± 0.51	2.14 ± 0.08	0.0015 ± 0.0002
334-336	Gα	2	0.5	22.5	0.28 ± 0.06	1.07 ± 0.53	1.35 ± 0.03	0.005 ± 0.0001
341-353	mGα	12	8.2	68.4	1.88 ± 0.47	1.86 ± 0.77	1.17 ± 0.16	0.02 ± 0.01
341-353	Gα	12	7.7	64.3	2.49 ± 0.34	1.95 ± 0.42	2.18 ± 0.10	0.017 ± 0.003

[a] Parameters obtained from fitting the H/D-exchange kinetics of Fig. 1B according to the single or double exponential expression of Eq. (2). The number in parentheses is the total number of exchangeable amide hydrogens.

[b] The amount of exchange before the first time point is estimated from the fit parameters and has a rate faster than 4 min^{-1}.