

SUPPORTING INFORMATION

TABLE S1

Chemical Shifts (ppm) of Assigned Proton Resonances of Nonphosphorylated and Phosphorylated Peptides in the presence of mAb 148 in H₂O and D₂O (95/5 v/v)

Residue	Proton	Human peptide			Torpedo peptide	
		Nonphosphorylated		Phosphorylated	Nonphosphorylated	Phosphorylated
		trans P ₁₀ P ₁₁ bond	cis P ₁₀ P ₁₁ bond			
G ₁ /A ₁	α	-	-	-	4.18	4.18
	β	-	-	-	1.62	1.61
T ₂ /N ₂	NH	8.34	8.64	-	-	-
	α	4.41	4.37	4.36	4.81	4.79
	β	4.27	4.26	4.28	2.96, 2.86	2.95, 2.87
	γ	1.22	1.22	1.24	-	-
	δ	-	-	-	7.84, 7.15	7.88, 7.14
D ₃	NH	8.36	8.65	8.68	8.61	8.65
	α	4.56	4.56	4.61	4.63	4.66
	β	2.78, 2.65	2.71, 2.64	2.75, 2.64	2.77, 2.72	2.81, 2.73
E ₄	NH	8.52	8.46	8.46	8.56	8.56
	α	4.13	4.17	4.18	4.26	4.27
	β	1.82	1.86	1.96, 1.89	1.96	2.03, 1.96
	γ	2.09, 2.04	2.13, 2.06	2.20	2.22, 2.14	2.29, 2.22
Y ₅	NH	8.40	8.29	8.35	8.33	8.36
	α	4.50	4.49	4.41	4.59	4.55
	β	2.96, 2.90	2.98, 2.91	2.90, 2.94	3.07, 2.99	3.08, 3.05
	δ	7.01	7.01	7.08	7.12	7.18
	ε	6.80	6.8	6.99	6.89	7.11
F ₆	NH	8.25	8.07	8.11	8.09	8.19
	α	4.61	4.55	4.50	4.62	4.62
	β	3.10, 3.00	3.08, 3.00	3.08, 3.01	3.15, 3.10	3.16, 3.11
	δ	7.22	7.22	7.25	7.30	7.33
	ε	7.36	7.35	7.37	7.43	7.45
	ζ	7.31	7.29	7.31	7.39	7.40

I ₇	NH	8.11	8.12	8.00	8.17	8.12
	α	4.07	4.09	4.03	4.11	4.12
	β	1.78	1.80	1.80	1.83	1.85
	γ	1.46, 1.14	1.47, 1.17	1.52, 1.21	1.56, 1.23	1.60, 1.27
		0.87	0.89	0.89	0.95	0.96
	δ	0.86	0.88	0.88	0.95	0.96
R ₈	NH	8.49	8.42	8.39	8.48	8.49
	α	4.28	4.26	4.24	4.35	4.33
	β	1.79, 1.63	1.80, 1.75	1.78	1.90, 1.83	1.86, 1.81
	γ	1.46	1.63	1.65	1.73	1.73
	δ	3.20	-	3.20	3.30	3.29
K ₉	NH	8.59	8.57	8.45	8.62	8.57
	α	4.57	4.58	4.57	4.63	4.66
	β	1.80	1.80	1.81	1.90	1.87
	γ	1.47	1.46	1.47	1.56	1.57
	δ	1.71	1.70	1.69	1.79	1.78
	ε	2.99	-	2.98	3.10	3.07
P ₁₀	α	4.71	4.71	4.72	4.49	4.49
	β	2.37, 2.04	2.37, 2.04	2.37, 2.05	2.41, 2.02	2.41, 2.03
	γ	1.90	1.90	1.93	2.14, 2.09	2.13, 2.10
	δ	3.86, 3.63	3.86, 3.63	3.85, 3.63	3.89, 3.74	3.88, 3.75
P ₁₁ /A ₁₁	NH	-	-	-	8.68	8.68
	α	4.47	4.47	4.48	4.42	4.42
	β	2.34, 2.05	2.34, 2.05	2.34, 2.06	1.52	1.51
	γ	1.96	1.96	1.99		
	δ	3.83, 3.66	3.83, 3.66	3.85		
S ₁₂ /G ₁₂	NH	8.55	8.55	8.55	8.19	8.19
	α	4.32	4.32	4.45	3.88, 3.86	3.86
	β	3.84	3.84	3.95, 3.89		
βA ₁₃ (G ₁₃)	NH	8.10	8.10	8.18		
	α	4.32	4.32	3.79		
