

**Table D.**  $^1\text{H}$  NMR chemical shifts of the free 2P-hNrf2 peptide in ppm from TSP-d4. Spectra were recorded at 280 K, pH = 7.2, and 20 mM sodium phosphate buffer;  $\text{H}_2\text{O}:\text{}^2\text{H}_2\text{O}$ , 9:1 (v/v).

Residue	Peptide	NH	$\alpha\text{H}$	$\beta\text{H}$	Others
	$\text{CH}_3\text{CO}$	-	-	-	$\text{CH}_3$ 2.14
P333	P1	-	4.42	2,31	$\gamma\text{CH}_2$ 2.02; $\delta\text{CH}_2$ 3.67
E334	E2	8.77	4.32	1.97; 2.10	$\gamma\text{CH}_2$ 2.32
S335	S3	8.48	4.55	3.91	
T336	T4	8.37	4.39	4.30	$\gamma\text{CH}_3$ 1.24
A337	A5	8.41	4.31	1.37	
E338	E6	8.46	4.20	1.88; 2.09	$\gamma\text{CH}_2$ 2.20
F339	F7	8.38	4.65	3.04; 3.13	$\delta\text{H}$ 7.26; $\epsilon\text{H}$ 7.36; $\zeta\text{H}$ 7.31
N340	N8	8.50	4.74	2.70; 2.81	$\gamma\text{NH}_2$ 7.05; 7.72
D341	D9	8.43	4.60	2,68	
S342	S10	8.33	4.50	3.85; 3.95	
D343	D11	8.55	4.73	2.71	
pS344	pS12	8.98	4.47	4.08	
G345	G13	8.69	3.92; 4.05	-	
I346	I14	7.90	4.27	1.92	$\gamma\text{CH}_2$ 1.20; 1.46; $\gamma\text{CH}_3$ 0.95; $?\delta\text{CH}_3$ 0.88
pS347	pS15	8.91	4.52	4.04	
L348	L16	8.72	4.33	1.67	$\gamma\text{H}$ 1.60; $\delta\text{CH}_3$ 0.93
N349	N17	8.52	4.77	2.87	$\gamma\text{NH}_2$ 7.03; 8.05
T350	T18	8.26	4.34	4.27	$\gamma\text{CH}_3$ 1.22
S351	S19	8.52	4.77	3,87	
P352	P20	-	4.49	2,33	$\gamma\text{CH}_2$ 2.04; $\delta\text{CH}_2$ 3.74
S353	S21	8.58	4.46	3.87	
V354	V22	8.29	4.16	2.10	$\gamma\text{CH}_3$ 0.95
A355	A23	8.51	4.34	1.38	
S356	S24	8.54	4.78	3,87	
P357	P25	-	4.44	2,31	$\gamma\text{CH}_2$ 2.02; $\delta\text{CH}_2$ 3.76; 3.85
E358	E26	8.67	4.18	1.93	$\gamma\text{CH}_2$ 2.14; 2.23
H359	H27	8.36	4.64	3.12; 3.22	$\delta^2\text{H}$ 7.12; $\epsilon^1\text{H}$ 8.07
	$\text{CONH}_2$	-	-	-	7.27; 7.64