Tables and figure captions

Table S1.
Thermodynamic parameters of thermal unfolding of 0.32 x 10^{-3} mol dm^{-3} cytochrome c in presence of 4-chlorobutan-1-ol at different pH (Scan Rate 0.5 K min^{-1}).

Alcohol†	$t_{1/2}$/°C	ΔH_{cal} (kJ.mol^{-1})	ΔC_P (kJ.K^{-1}.mol^{-1})	ΔS (kJ.K^{-1}.mol^{-1})	β (ΔH_{VH}/ ΔH_{cal})	σ*
pH=4.0						
0	71.6	360	7.4	0.92	0.97	0.839
0	71.6	352	7.1	1.02	1.02	0.583
0	71.7	369	6.9	1.07	0.98	0.982
0	71.8	362	6.1	1.05	1.04	0.846
Average	**71.6**	**360**	**6.9**	**1.05**	**1.00**	
	±0.1	**±7.0**	**±0.6**	**±0.07**	**±0.03**	
5	70.9	391	5.3	1.00	1.03	0.535
5	70.1	381	4.4	1.11	1.00	0.835
5	70.2	391	5.4	1.14	1.00	0.901
Average	**70.4**	**387**	**5.0**	**1.13**	**1.01**	
	±0.4	**±6.0**	**±0.6**	**±0.07**	**±0.02**	
25[a]	67.7	412	5.3	1.21	0.98	1.450
25[a]	67.6	404	4.4	1.19	1.00	1.390
25[a]	67.5	406	5.4	1.19	1.06	0.845
Average	**67.6**	**407**	**5.3**	**1.20**	**1.01**	
	±0.1	**±4.0**	**±0.1**	**±0.01**	**±0.04**	
50[a]	64.9	372	6.3	-	-	0.875
50[a]	64.4	379	8.1	-	-	0.731
50[a]	64.2	380	7.2	-	-	0.754
Average	**64.5**	**377**	**7.2**			
	±0.4	**±4.0**	**±0.9**			
75	60.6	364	5.9	-	-	1.490
75	60.5	367	3.1	-	-	1.460
75	60.1	370	4.5	-	-	0.868
Average	**60.4**	**367**	**4.5**			
	±0.3	**±3.0**	**±1.4**			

Alcohol†	$t_{1/2}$/°C	ΔH_{cal} (kJ.mol^{-1})	ΔC_P (kJ.K^{-1}.mol^{-1})	ΔS (kJ.K^{-1}.mol^{-1})	σ*
100	55.7	372	6.5	-	0.872
100	55.7	378	9.7	-	1.120
100	55.6	373	8.1	-	0.882
100	55.7	376	6.0	-	0.876
Average	**55.7**	**375**	**7.6**		
	±0.1	**±3.0**	**±1.7**		
125	53.2	348	5.8	-	0.885
125	53.1	337	4.8	-	0.842
125	53.2	343	6.0	-	0.776
Average	**53.1**	**343**	**5.5**		
	±0.1	**±6.0**	**±0.6**		
150	48.3	265	5.8	-	1.060
150	48.6	259	4.0	-	0.738
150	48.5	263	4.5	-	0.952
Average	**48.5**	**262**	**4.8**		
	±0.2	**±3.0**	**±0.9**		
175	42.9	206	3.6	-	0.663
175	43.4	203	3.9	-	0.724
175	43.0	215	3.1	-	0.697
Average	**43.1**	**208**	**3.5**		
	±0.3	**±6.0**	**±0.4**		
200	35.3	134	3.6	-	0.449
200	36.0	143	4.0	-	0.398
200	35.0	137	3.8	-	0.441
Average	**35.4**	**138**	**3.8**		
	±0.5	**±5.0**	**±0.20**		
pH=6.0					
25	71.7	359	7.6	-	1.130
25	71.2	360	4.5	-	0.977
25	71.4	367	6.1	-	0.956
Average	**71.4**	**362**	**6.1**		
	±0.3	**±4.0**	**±1.6**		

Alcohol[†]	**$t_{1/2}$/°C**	**ΔH_{cal} (kJ.mol^{-1})**	**ΔC_P (kJ.K^{-1}.mol^{-1})**	**ΔS (kJ.K^{-1}.mol^{-1})**	**σ***
50	62.2	331	4.7	-	1.680
50	61.8	335	4.9	-	1.430
50	61.8	331	5.7	-	1.470
Average	**61.9**	**332**	**5.1**		
	±0.3	**±0.2**	**±0.5**		
75	54.5	225	6.5	-	0.665
75	54.9	232	7.1	-	1.220
75	54.8	220	4.7	-	0.949
Average	**54.7**	**225**	**6.1**		
	±0.2	**±6.0**	**±1.2**		
100	48.6	204	4.2	-	0.647
100	48.6	196	5.1	-	0.757
100	48.8	199	6.0	-	0.704
Average	**48.7**	**200**	**5.1**		
	±0.1	**±4.0**	**±0.9**		
125	41.4	112	5.7	-	0.410
125	41.0	109	4.6	-	0.256
125	41.8	115	5.2	-	0.463
Average	**41.4**	**112**	**5.2**		
	±0.4	**±3.0**	**±0.6**		
pH=7.0					
25	73.9	356	1.8	-	2.970
25	73.8	348	1.6	-	3.030
25	73.7	354	3.8	-	2.280
25	73.5	339	1.8	-	2.390
Average	**±0.2**	**349**	**2.3**		
		±8.0	**±1.0**		
50	64.8	336	8.9	-	0.886
50	64.5	334	4.9	-	0.999
50	64.7	353	7.7	-	0.771
Average	**64.7**	**341**	**7.2**		
	±0.2	**±10.0**	**±2.1**		

Alcohol[†]	$t_{1/2}$/°C	ΔH_{cal} (kJ.mol^{-1})	ΔC_P (kJ.K^{-1}.mol^{-1})	ΔS (kJ.K^{-1}.mol^{-1})	σ*
75	58.6	314	4.6	-	1.510
75	58.0	311	4.8	-	1.530
75	58.4	305	5.4	-	1.460
Average	**58.3**	**310**	**4.9**		
	±0.3	**±5.0**	**±0.40**		
100	52.4	256	5.2	-	0.986
100	52.1	244	4.4	-	0.937
100	51.9	245	1.9	-	0.950
Average	**52.1**	**248**	**3.8**		
	±0.3	**±7.0**	**±1.7**		
125	43.1	181	2.4	-	0.479
125	43.6	177	3.2	-	0.457
125	43.4	177	3.9	-	0.387
Average	**43.4**	**178**	**3.2**		
	±0.3	**±2.0**	**±0.8**		
150	35.9	156	4.0	-	0.379
150	35.5	144	3.8	-	0.347
150	36.0	152	2.3	-	0.383
Average	**35.8**	**151**	**3.4**	**-**	
	±0.3	**±0.6**	**±0.9**		

a σ is standard deviation of the fit in kJ.K^{-1}.mol^{-1}
† The concentration of alcohol and protein is in 10^{-3} mol dm^{-3}

Table S2.
Thermodynamic parameters of unfolding of 0.32 x 10^{-3} mol dm^{-3} cytochrome c in presence of 4-chlorobutan-1-ol at different pH (Scan rate dependence)

Scan Rate (K min^{-1})	Alcohol†	$t_{1/2}$/°C	ΔH_{cal} (kJ.mol^{-1})	ΔC_P (kJ.K^{-1}.mol^{-1})	σ*
pH=4.0					
0.1	100	46.9	252	5.4	1.47
0.1	100	46.3	249	3.9	1.54
0.1	100	46.3	248	3.9	1.11
Average	**100**	**46.5**	**250**	**4.4**	
	100	**±0.3**	**±2.0**	**±0.9**	
0.3	100	53.6	318	3.6	0.688
0.3	100	53.9	330	5.1	0.455
0.3	100	54.0	318	3.7	0.681
Average	**100**	**53.8**	**322**	**4.1**	
		±0.2	**±7.0**	**±0.8**	
0.5	100	55.7	372	6.5	0.872
0.5	100	55.7	378	7.0	1.120
0.5	100	55.6	373	8.1	0.882
0.5	100	55.7	376	6.0	0.876
Average	**100**	**55.7**	**375**	**6.9**	
		±0.1	**±3.0**	**±0.9**	
0.7	100	58.8	330	7.4	0.561
0.7	100	58.7	329	7.2	0.532
0.7	100	58.5	327	7.1	0.520
Average	**100**	**58.7**	**329**	**7.2**	
		±0.2	**±2.0**	**±0.2**	
1.0	100	61.0	303	6.4	0.866
1.0	100	60.8	292	6.6	0.923
1.0	100	61.7	305	4.0	0.332
Average	**100**	**61.2**	**300**	**5.7**	
		±0.5	**±7.0**	**±1.4**	
pH=6.0					
0.1	75	44.4	168	8.1	0.700
0.1	75	44.7	181	6.4	0.884
0.1	75	44.8	178	7.3	0.658
Average	**75**	**44.6**	**175**	**7.3**	
		±0.1	**±7.0**	**±0.9**	

Scan Rate ($K\ min^{-1}$)	Alcohol†	$t_{1/2}$/°C	ΔH_{cal} ($kJ.mol^{-1}$)	ΔC_P ($kJ.K^{-1}.mol^{-1}$)	σ*
0.3	75	51.4	202	3.7	0.859
0.3	75	51.8	204	4.1	0.823
0.3	75	52.0	200	5.9	1.090
Average	**75**	**51.7**	**202**	**4.6**	
		±0.3	**±2.0**	**±1.2**	
0.5	75	54.5	225	6.5	0.665
0.5	75	54.9	230	7.1	1.220
0.5	75	54.8	220	4.7	0.949
Average	**75**	**54.7**	**225**	**6.1**	
		±0.2	**±5.0**	**±1.2**	
0.7	75	57.1	246	3.8	0.733
0.7	75	56.8	250	3.2	0.753
0.7	75	57.1	254	4.9	0.547
Average	**75**	**57.0**	**250**	**4.0**	
		±0.2	**±4.0**	**±0.9**	
1.0	75	61.1	277	4.2	0.764
1.0	75	61.5	275	4.8	1.200
1.0	75	61.2	275	4.3	1.080
1.0	75	61.2	285	3.2	0.963
Average	**75**	**61.3**	**278**	**4.1**	
		±0.2	**±5.0**	**±0.7**	
pH=7.0					
0.1	100	43.2	170	4.3	0.571
0.1	100	42.8	180	4.1	0.702
0.1	100	42.8	181	3.9	0.792
Average	**100**	**42.9**	**177**	**4.1**	
		±0.2	**±6.0**	**±0.2**	
0.3	100	49.0	218	1.3	0.569
0.3	100	49.4	233	3.2	0.865
0.3	100	49.4	234	2.5	0.742
Average	**100**	**49.3**	**228**	**2.3**	
		±0.2	**±9.0**	**±1.0**	
0.5	100	52.4	256	5.2	0.986
0.5	100	52.1	244	4.4	0.937
0.5	100	51.9	245	4.8	0.950

Average	**100**	**52.1**	**248**	**4.8**
		±0.3	**±7.0**	**±0.4**

Scan Rate (K min^{-1})	**Alcohol†**	**$t_{1/2}$/°C**	**ΔH_{cal} (kJ.mol^{-1})**	**ΔC_P (kJ.K^{-1}.mol^{-1})**	**σ***
0.7	100	54.7	276	1.3	0.953
0.7	100	54.8	273	1.4	0.959
0.7	100	54.6	270	0.4	0.993
Average	**100**	**54.7**	**273**	**1.0**	
		±0.1	**±3.0**	**±0.6**	
1.0	100	56.7	233	2.1	0.893
1.0	100	57.1	239	0.6	0.976
1.0	100	56.7	234	0.0	1.010
1.0	100	57.4	229	2.2	1.090
Average	**100**	**57.0**	**234**	**1.2**	
		±0.3	**±4.0**	**±1.1**	

Table S3.
Thermodynamic parameters of thermal unfolding of cytochrome c in presence of 4-chlorobutan-1-ol at different pH (Scan Rate 0.5 K min^{-1})

Protein†	Alcohol†	$t_{1/2}$/°C	ΔH_{cal} ($kJ.mol^{-1}$)	ΔC_P ($kJ.K^{-1}.mol^{-1}$)	σ*
pH=4.0					
0.16	100	54.1	352	6.9	0.664
0.16	100	53.6	343	5.2	0.601
0.16	100	53.8	341	7.3	0.689
Average	**100**	**53.8**	**345**	**6.5**	
		±0.3	**±6.0**	**±1.2**	**±0.02**
0.24	100	55.1	355	5.8	0.700
0.24	100	55.0	356	3.6	0.754
0.24	100	55.0	350	5.5	0.687
Average	**100**	**55.0**	**354**	**4.9**	
		±0.1	**±3.0**	**1.2**	
0.32	100	55.7	372	6.5	0.872
0.32	100	55.7	378	9.7	1.120
0.32	100	55.6	373	8.1	0.882
0.32	100	55.7	376	6.0	0.876
Average	**100**	**55.7**	**375**	**7.6**	
		±0.1	**±3.0**	**±1.7**	
0.40	100	56.6	351	4.0	0.809
0.40	100	56.8	356	5.8	0.623
0.40	100	56.8	344	4.2	0.834
Average	**100**	**56.7**	**350**	**4.7**	
		±0.1	**±6.0**	**±1.0**	
0.48	100	57.6	330	6.7	0.657
0.48	100	58.1	334	4.5	0.707
0.48	100	57.4	327	4.6	0.608
Average	**100**	**57.7**	**330**	**5.3**	
		±0.4	**±4.0**	**±1.2**	
0.57	100	59.1	321	5.4	0.964
0.57	100	59.2	331	5.2	0.737
0.57	100	58.7	328	5.6	0.775
Average	**100**	**59.0**	**327**	**5.4**	

		±0.3	±5.0	±0.2	
Protein†	**Alcohol†**	**$t_{1/2}$/°C**	**ΔH_{cal} (kJ.mol^{-1})**	**ΔC_P (kJ.K^{-1}.mol^{-1})**	**σ***
pH=6.0					
0.08	75	47.8	178	5.9	0.591
0.08	75	47.8	182	3.9	0.829
0.08	75	47.8	172	4.0	0.662
Average	**75**	**47.8**	**177**	**4.6**	
		±0.0	**±5.0**	**±1.1**	
0.16	75	50.0	194	4.5	0.833
0.16	75	50.3	197	4.6	0.929
0.16	75	50.5	192	3.4	0.920
Average	**75**	**50.3**	**194**	**4.2**	
		±0.3	**±3.0**	**±0.7**	
0.24	75	52.7	205	3.9	0.994
0.24	75	52.4	208	4.3	0.779
0.24	75	52.8	213	4.1	0.941
Average	**75**	**52.6**	**209**	**4.1**	
		±0.2	**±4.0**	**±0.2**	
0.32	75	54.5	225	6.5	0.665
0.32	75	54.9	230	7.1	1.220
0.32	75	54.8	220	4.7	0.949
Average	**75**	**54.7**	**225**	**6.1**	
		±0.2	**±5.0**	**±1.2**	
0.40	75	57.0	237	5.2	0.733
0.40	75	56.1	235	6.0	0.753
0.40	75	56.9	236	5.2	0.547
Average	**75**	**56.7**	**236**	**5.5**	
		±0.5	**±1.0**	**±0.5**	
0.48	75	59.0	252	5.0	1.560
0.48	75	58.2	251	5.1	1.560
0.48	75	58.2	241	5.1	1.420
Average	**75**	**58.5**	**248**	**5.1**	
		±0.5	**±6.0**	**±0.1**	

Protein[†]	**Alcohol**[†]	$t_{1/2}$/°C	ΔH_{cal} (kJ.mol^{-1})	ΔC_P (kJ.K^{-1}.mol^{-1})	σ*
0.57	75	59.6	261	4.6	1.390
0.57	75	59.7	267	4.1	1.350
0.57	75	60.1	270	6.1	1.390
Average		**59.8**	**266**	**4.9**	
		±0.3	**±5**	**±1.0**	

Figure Legends (in supplementary information)

Figure S1. A plot of $\Delta t_{1/2}$ versus alcohol concentration for the thermal denaturation of 0.32 x 10^{-3} mol dm^{-3} cytochrome c in presence of varying concentrations of 4-chlorobutan-1-ol, pH 4.0.

Figure S2. A plot of ΔH_{cal} versus alcohol concentration for the thermal denaturation of 0.32 x 10^{-3} mol dm^{-3} cytochrome c in presence of varying concentrations of 4-chlorobutan-1-ol, pH 4.0.

Figure S3. A plot of $t_{1/2}$ versus protein concentration for thermal denaturation of cytochrome c in presence of 100 x 10^{-3} mol dm^{-3} 4-chlorobutan-1-ol, pH 4.0.

Figure S4. A plot of ΔH_{cal} versus protein concentration for thermal denaturation of cytochrome c in presence of 100 x 10^{-3} mol dm^{-3} 4-chlorobutan-1-ol at pH 4.0.

Figure S5. Fluorescence emission spectra of 16 x 10^{-6} mol dm^{-3} cytochrome c at pH 4.0 in (B) buffer; and in the presence of varying concentrations of 4-chlorobutan-1-ol: (C) 25 ; (D) 50 ; (E) 50 at 69.0 °C; (F) 50 at 83.0 °C; (G) 100 ; (H) 100 at 70.0 °C; (I) 200 ; and (J) 225 x 10^{-3} mol dm^{-3}.

Figure S6. Stern-Volmer plot for quenching of the intrinsic fluorescence of 24 x 10^{-6} mol dm^{-3} cytochrome c in presence of (■) 50 x 10^{-3} mol dm^{-3} 4-chlorobutan-1-ol at 69.0 °C; (●) 50 x 10^{-3} mol dm^{-3} 4-chlorobutan-1-ol at 83.0 °C; and (▲) 200 x 10^{-3} mol dm^{-3} 4-chlorobutan-1-ol by varying concentrations of acrylamide (0 – 0.45 mol dm^{-3}) at pH 4.0.

Figure S7. A plot of ln (ν/T_m^2) versus $1/T_m$ for thermal denaturation of 0.32 x 10^{-3} mol dm^{-3} cytochrome c in presence of 75 x 10^{-3} mol dm^{-3} 4-chlorobutan-1-ol at pH 6.0.

Figure S8. Near-UV CD spectra of 24 x 10^{-6} mol dm^{-3} cytochrome c at pH 6.0 in (A) buffer; and in presence of varying concentrations of 4-chlorobutan-1-ol: (D) 50 and (F) 100 x 10^{-3} mol dm^{-3}.

Figure S9. Far-UV CD spectra of 8 x 10^{-3} mol dm^{-3} cytochrome c at pH 6.0 in (A) buffer; and in the presence of varying concentrations of 4-chlorobutan-1-ol: (D) 50 ; and (F) 100 x 10^{-3} mol dm^{-3}.

Figure S10. Near-UV CD spectra of 24 x 10^{-6} mol dm^{-3} cytochrome c at pH 7.0 in (A) buffer; and in the presence of varying concentrations of 4-chlorobutan-1-ol: (B) 50; and (F) 125 x 10^{-3} mol dm^{-3}.

Figure S11. Far-UV CD spectra of 8 x 10^{-6} mol dm^{-3} cytochrome c at pH 7.0 in (A) buffer; and in the presence of varying concentrations of 4-chlorobutan-1-ol: (D) 50 ; and (F) 125 x 10^{-3} mol dm^{-3}.

Figure S12. Fluorescence emission spectra of 16 x 10^{-6} mol dm^{-3} cytochrome c at pH 7.0 in (B) buffer; and in the presence of varying concentrations of 4-chlorobutan-1-ol: (C) 25 ; (D) 100 ; (E) 100 at 70.0 °C; (F) 150 ; and (G) 175 x 10^{-3} mol dm^{-3}.

Figure S13. Fluorescence emmision spectra obtained from ANS (11.6 x 10^{-5} mol dm^{-3}) binding studies of 16 x 10^{-6} mol dm^{-3} cytochrome c at pH 7.0 in (B) buffer; and in the presence of varying concentrations of 4-chlorobutan-1-ol: (C) 25 ; (D) 100 ; (E) 100 at 70.0 °C; (F) 150 ; and (G) 175 x 10^{-3} mol dm^{-3}.

Figure S14. Fluorescence emmision spectra obtained from energy transfer between 16 x 10^{-6} mol dm^{-3} cytochrome c and ANS (11.6 x 10^{-5} mol dm^{-3}) at pH 7.0 in (B) buffer; and in the presence of varying concentrations of 4-chlorobutan-1-ol: (C) 25 ; (D) 100 ; (E) 100 at 70.0 °C; (F) 150 ; and (G) 175 x 10^{-3} mol dm^{-3}.

Figure S15. Stern-Volmer plot for quenching of the intrinsic fluorescence of 24 x 10^{-6} mol dm^{-3} cytochrome c in presence of (■) 150 x 10^{-3} mol dm^{-3} 4-chlorobutan-1-ol; (●) 100 x 10^{-3} mol dm^{-3} 4-chlorobutan-1-ol at 70.0 °C by varying concentrations of acrylamide (0 – 0.45 mol dm^{-3}) at pH 7.0.