Table 3. Comparison of the kinetic parameters obtained for residues of Groups 1, 2, and 3 as defined in Tables 1 and 2

		12°C		17°C		22°C		27°C	
Group	χ^2/N	k_a, s^{-1}	k_b, s^{-1}	k_a, s^{-1}	k_b, s^{-1}	k_a, s^{-1}	k_b, s^{-1}	k_a, s^{-1}	k_b, s^{-1}
1	0.6	–	–	5.7 ± 0.2	725 ± 59	10.1 ± 0.3	1,242 ± 56	16.9 ± 0.8	2,008 ± 94
2	0.8	22.1 ± 0.5	144 ± 10	36 ± 0.6	223 ± 10	60 ± 1	355 ± 8	96 ± 4	539 ± 10
3	0.8	83 ± 5	393 ± 7	116 ± 5	611 ± 7	165 ± 9	972 ± 11	227 ± 16	1,473 ± 26

Relaxation dispersion data were fit directly to a model where k_a and k_b were constrained according to the relation $k_{a/b} = \frac{k_B T}{h} \exp\left(-\Delta G^{+}_{a/b} / RT\right)$. Chemical-shift differences between states *a* and *b*, $\Delta\varpi$, were allowed to vary with temperature. Note that in Tables 1 and 2, parameters were obtained from fits where rates were not constrained to a specific functional form and where temperature-independent $\Delta\varpi$ values were assumed.