Table 1. Equilibrium and kinetic data for folding of MLAc

Parameters	Equilibrium	Kinetics: Far-UV CD (%)	Kinetics: Fluorescence (%)
$[urea]_{1/2}$	2.3 ± 0.1 M	—	—
m_{UN}	−13.5 ± 1 kJ/mol,M	—	—
$\Delta G_{UN}(H_2O)$	31 ± 1 kJ/mol	—	—
k_{burst}	—	>1,000 s^{-1} (50)	>1,000 s^{-1} (20)
k_{fast}	—	—	0.34 ± 0.01 s^{-1} (30)
m_{fast}	—	—	1.5 ± 0.05 kJ/mol,M
k_{IN}	—	0.032 ± 0.002 s^{-1} (50)	0.029 ± 0.002 s^{-1} (50)
m_{IN}	—	−1.22 ± 0.08 kJ/mol,M	−1.39 ± 0.08 kJ/mol,M
k_{unf}	—	0.04 ± 0.01 ms^{-1} (100)	0.04 ± 0.01 ms^{-1} (100)
m_{unf}	—	3.97 ± 0.11 kJ/mol,M	3.85 ± 0.09 kJ/mol,M
$\Delta G_{IN}(H_2O)$	—	16.5 ± 0.5 kJ/mol	16.1 ± 1.0 kJ/mol
$m_{IN(eq)}$	—	−5.19 ± 0.19 kJ/mol,M	−5.24 ± 0.17 kJ/mol,M

Equilibrium unfolding (at pH 7.5 and 20°C) is two-state, whereas the simplest mechanism that explains the kinetic-folding data for MLAc is $I_{burst} \leftrightarrow U \leftrightarrow I \leftrightarrow I \leftrightarrow N$. $\Delta G_{IN}(H_2O)$ was calculated as $RTln(k_{IN}/k_{unf})$ and $m_{IN(eq)}$ as $m_{IN} - m_{unf}$; the Tanford β_I value was calculated as $m_{UI(eq)}/m_{UN} = (m_{UN} - m_{IN(eq)})/m_{UN}$ to be 0.61 ± 0.03. For the various kinetic phases, relative amplitude changes are given in parentheses after the rate constants. Standard deviations are derived from the fits to the data (Figs. 3 and 5*A*). For the equilibrium parameters, CD and fluorescence data were averaged. —, not applicable.