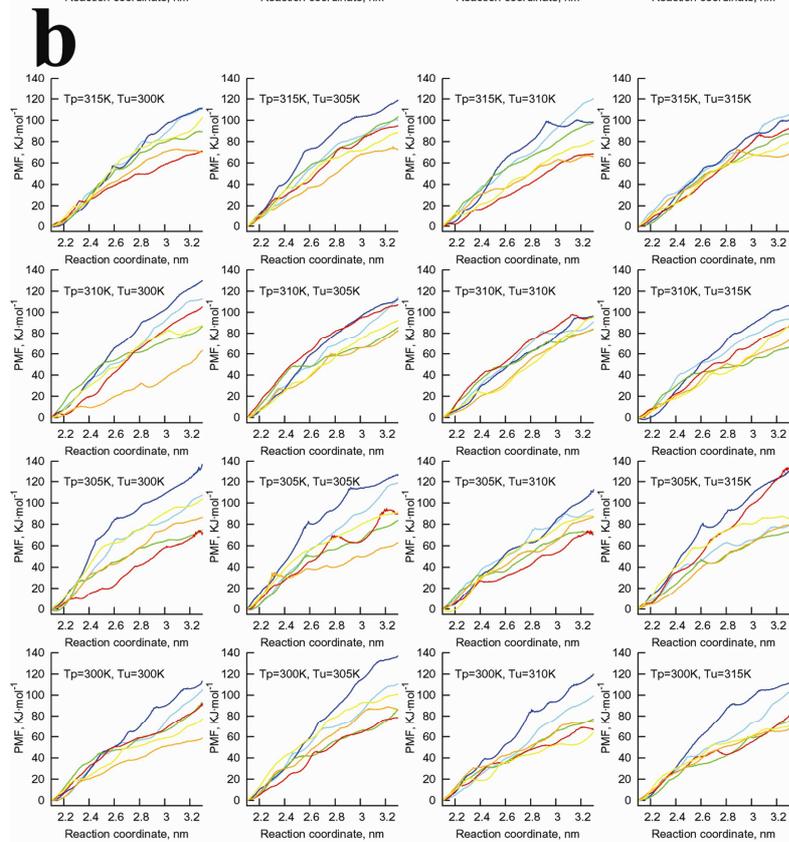
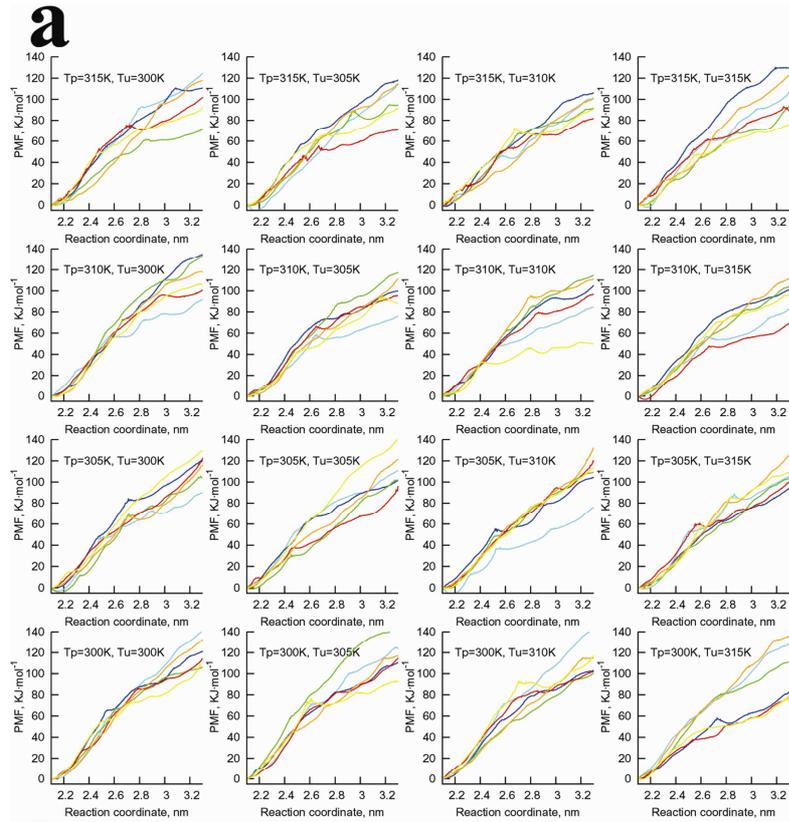


Supplementary.



**FigS1. Collection of individual PMFs along the reaction coordinate of s3 loops unfolding for D-model (blue), C-model (cyan), N-model (green), V-model (red), A-model (orange) and G-model (yellow). The pulling is performed under slightly different temperatures $T_p=300\text{K}$, 305K , 310K and 315K . Each of pulling trajectories was sampled under slightly different temperatures $T_u=300\text{K}$, 305K , 310K and 315K .
a, PFM of s3/1 loops melting. b, PMF of s3/2 loops melting.**