

Supporting Material

Small peptide binding stiffens the ubiquitin-like protein–SUMO1

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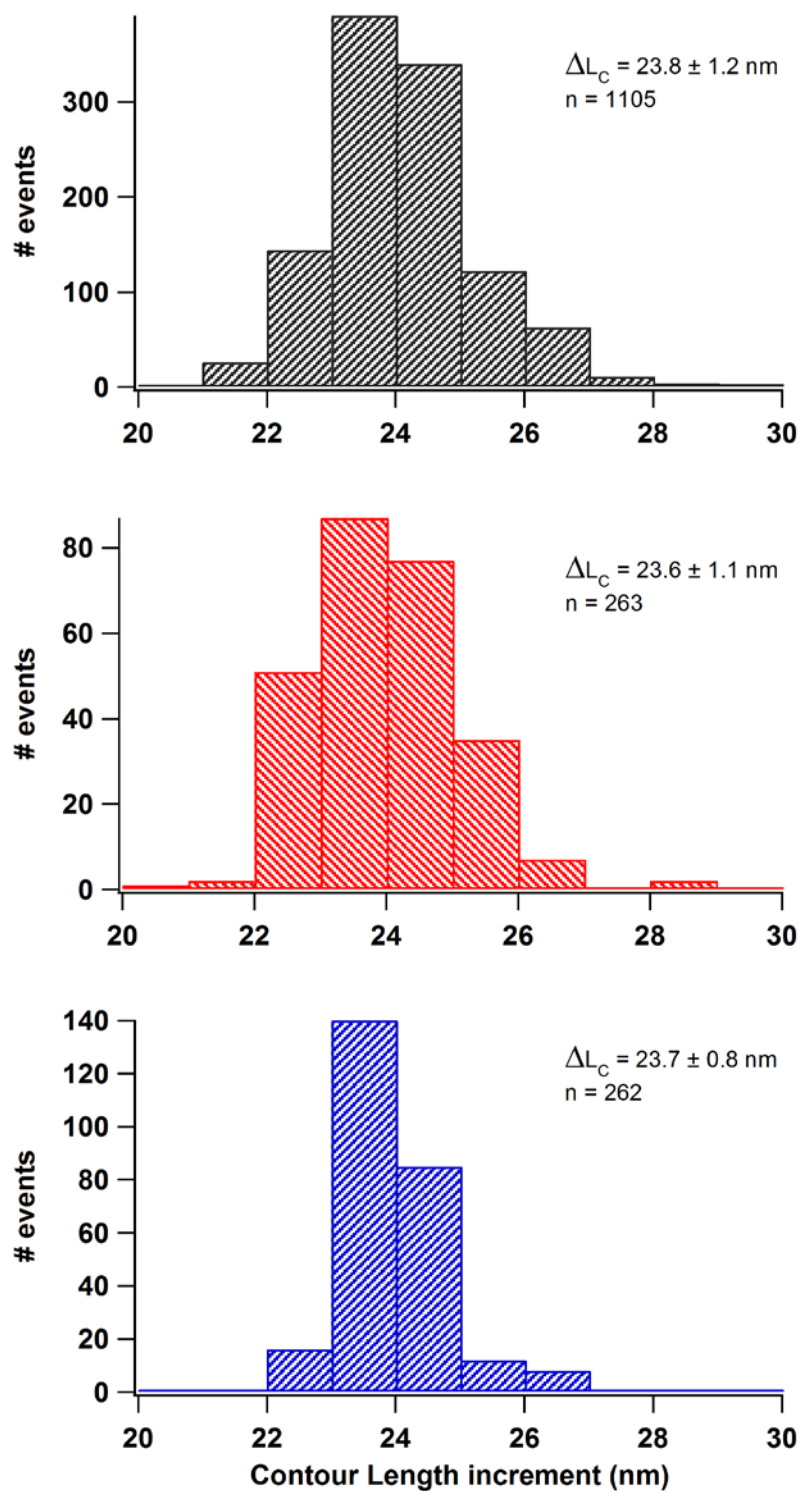


Figure S1: Contour length increment (ΔL_c) histograms of SUMO1 (top) and its complexes with the SBM peptides S10 (middle) and S12 (bottom). The ΔL_c of SUMO1 is same with or without the SBM peptides. Here n represents number of events.

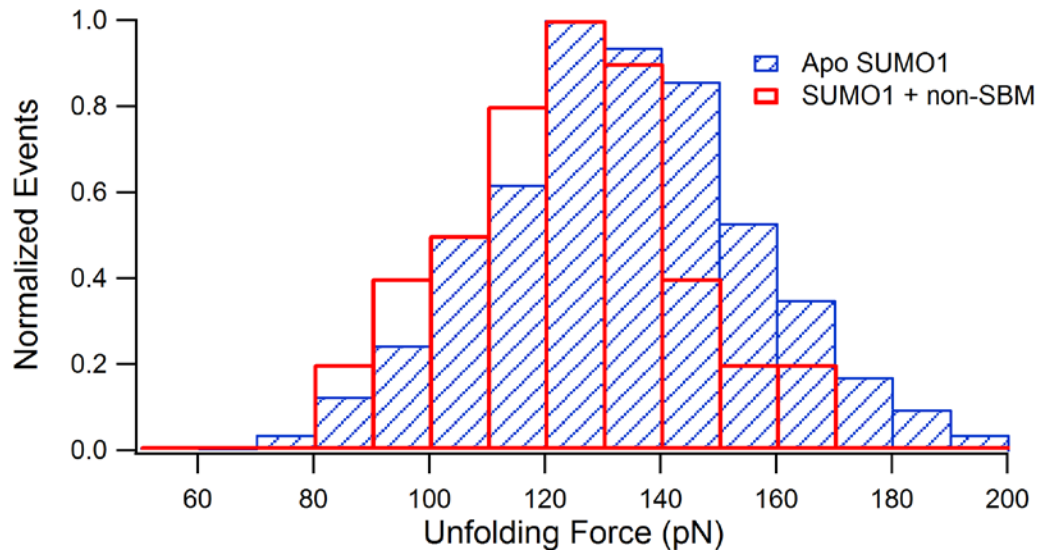


Figure S2: Unfolding force of SUMO1 remains unchanged in the presence of a peptide that does not bind to it (non-SBM). The peptide is RCNQYCGLGHQNM and its concentration in solution is 1 mM. Overlay of unfolding force histograms of apo SUMO1 and non-SBM bound SUMO1 clearly shows that their unfolding force distributions are similar. The average unfolding force of SUMO1 bound to non-SBM is 124 ± 20 pN.

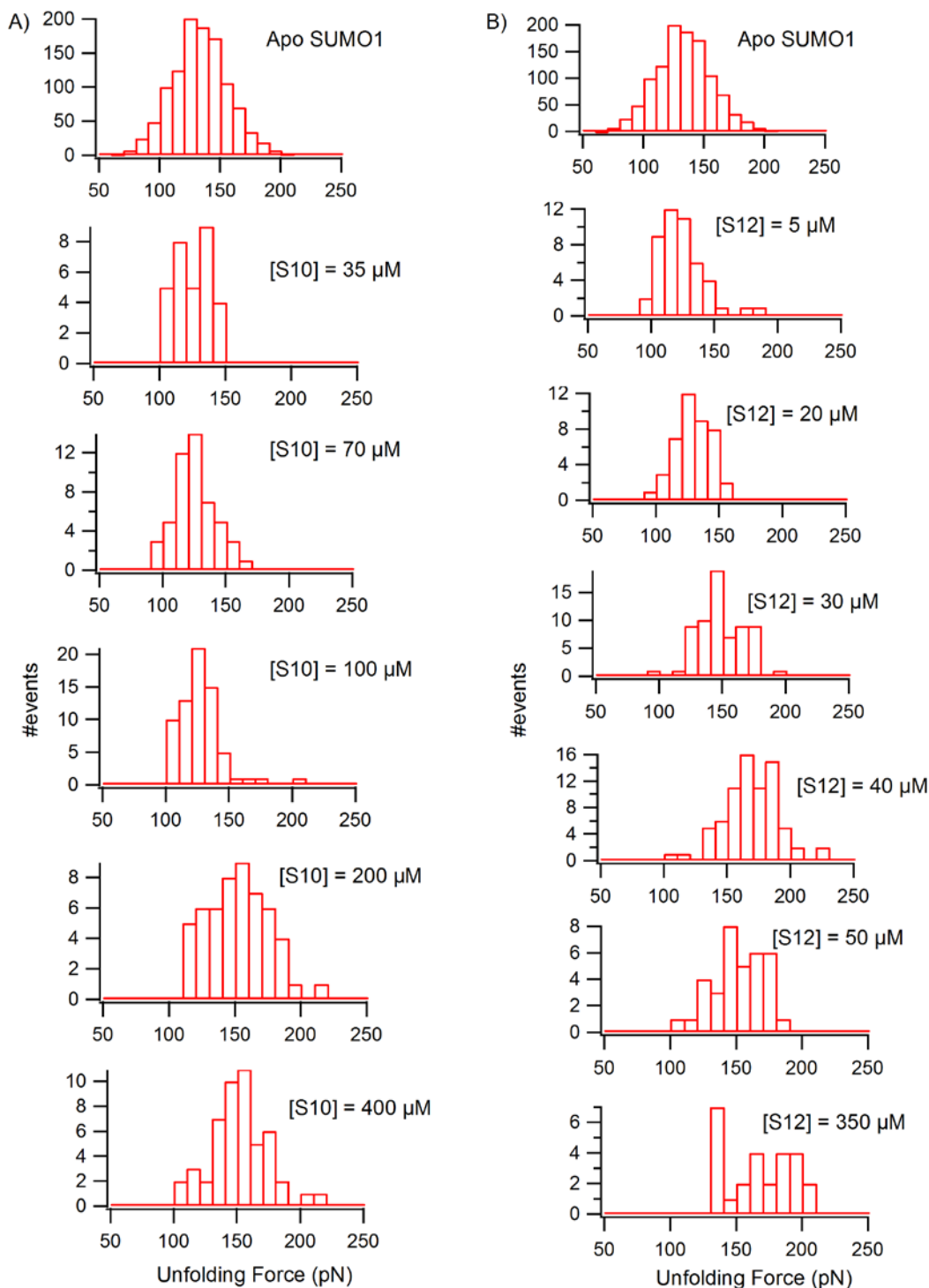


Figure S3: Unfolding force histograms of SUMO1 obtained at different concentrations of the S10 (A) and S12 (B) clearly show that the unfolding force increases with peptide concentration and saturates after a certain concentration of peptide. Here [S10] and [S12] indicate the concentrations of the corresponding peptides and apo is the ligand-free SUMO1.

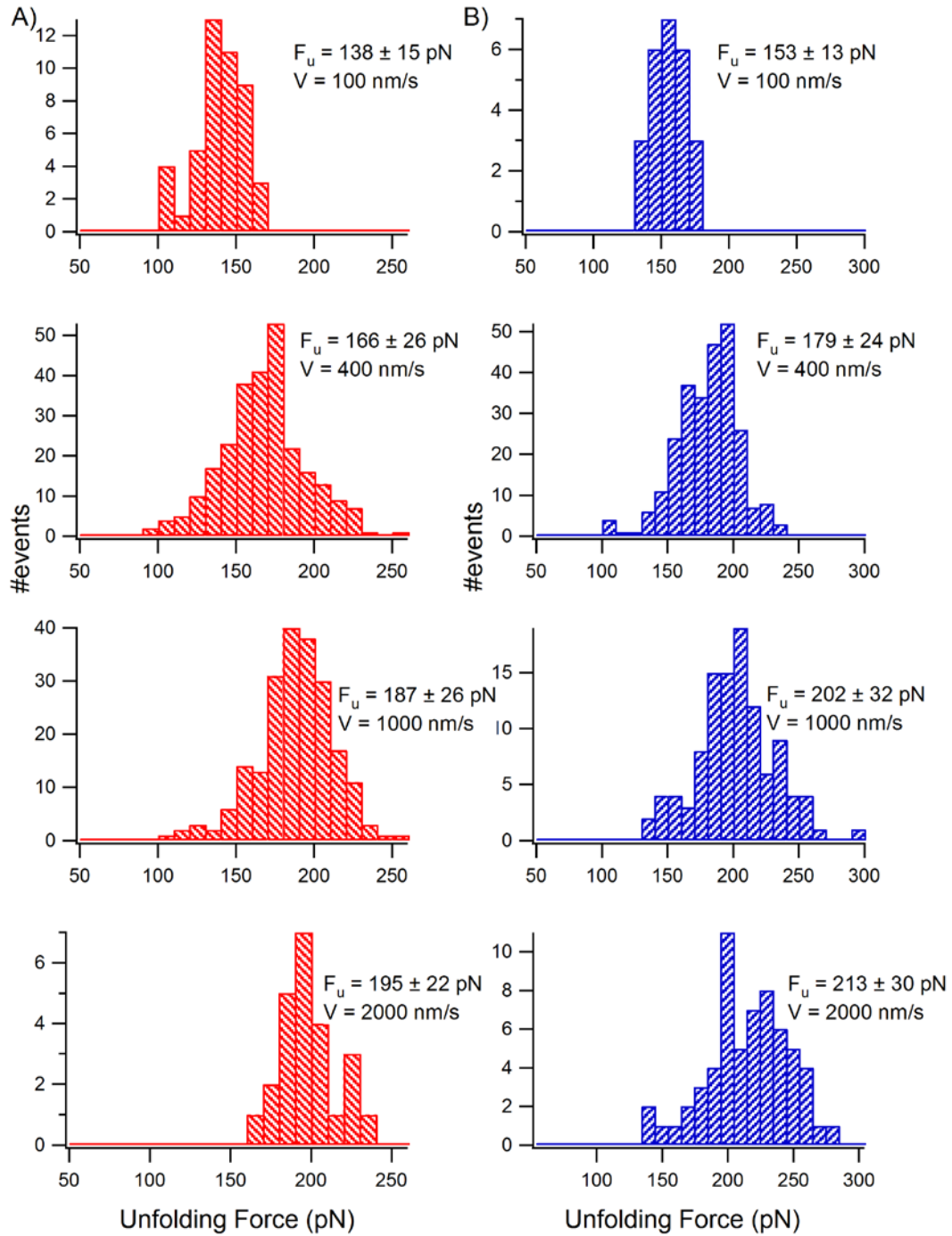


Figure S4: Pulling speed dependent unfolding force histograms of SUMO1 complex with the SBM peptides S10 (A) and S12 (B) clearly show an increase in the unfolding force with the pulling speed. Here F_u is unfolding force and V is pulling speed.