



Supplementary information, Figure S3. Detailed interactions between Merlin FERM and CTD.

(A) Comparison of the detailed interactions of $\alpha 2_{CTD}$ and $\alpha 3_{CTD}$ from CTD of Merlin and Moesin with their respective FERM domains. In this comparison, the critical interactions between CTD and FERM of Moesin are labeled in green. The corresponding residues in these interaction positions for Merlin are labeled in brackets. It is noted that several key interactions (highlighted with red boxes) that are observed in the Moesin-FERM/CTD complex are missing in the Merlin-FERM/CTD complex, presumably accounting in part for the weak head-to-tail interaction of Merlin.

(B) Molecular details of the interaction between the BB region and the $\alpha 1_{CTD}/\alpha 2_{CTD}$ loop. The enlarged view of BB region and the $\alpha 1_{CTD}/\alpha 2_{CTD}$ loop indicates that deletion of Q178 is likely to perturb their interaction, as the four consecutive residues in the

BB region (N175, L176, Q178, and M179) tightly interdigitate with highly conserved residues from the $\alpha 1_{\text{CTD}}/\alpha 2_{\text{CTD}}$ loop of CTD.