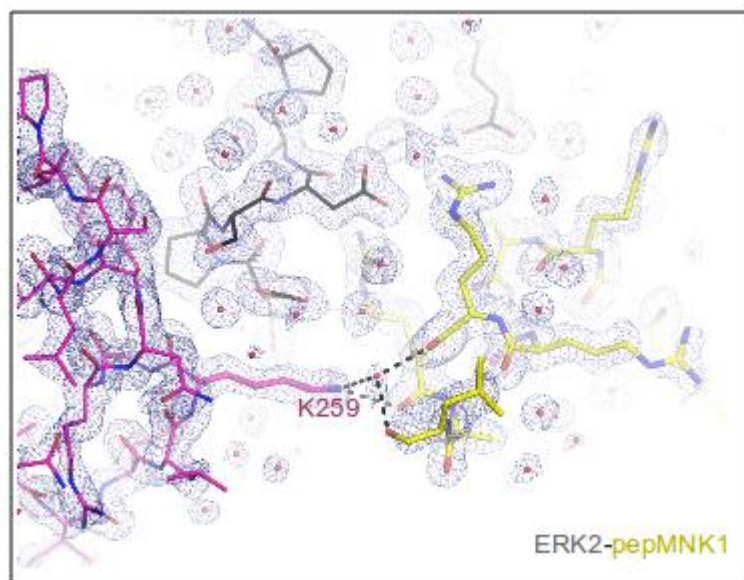
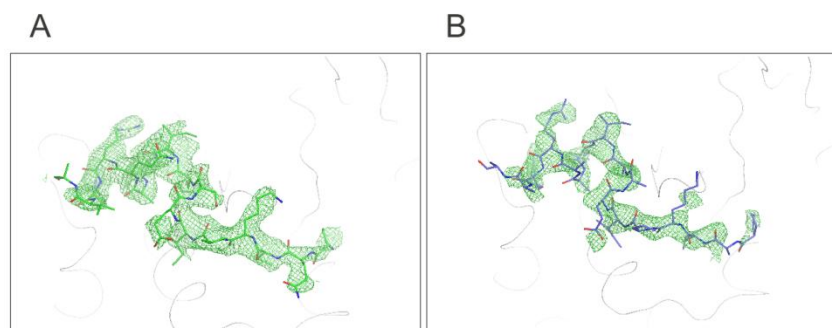


## Supplementary Material



**Figure S1. Peptide mediated crystal packing interactions in the ERK2-pepMNK1 complex.**

Lys259 from an ERK2 symmetry mate (in magenta) forms crystal packing interactions (direct and water mediated H-bonds) to pepMNK1 (in yellow) bound to ERK2 (in gray). ( $2F_o-F_c$  map with the final ERK2 WT-pepMNK1 model contoured at  $1\sigma$ . PDB ID: 2Y9Q; Garai et al., 2012)



**Figure S2. Electron density maps for MAPK-docking peptides complexes.**

(A)  $F_o-F_c$  simulated annealing omit maps contoured at  $2\sigma$  for the ERK2\_AA-pepRSK1 complex.

(B)  $F_o-F_c$  simulated annealing omit maps contoured at  $2\sigma$  for the ERK2\_AA-pepRSK1\_SQAA complex.