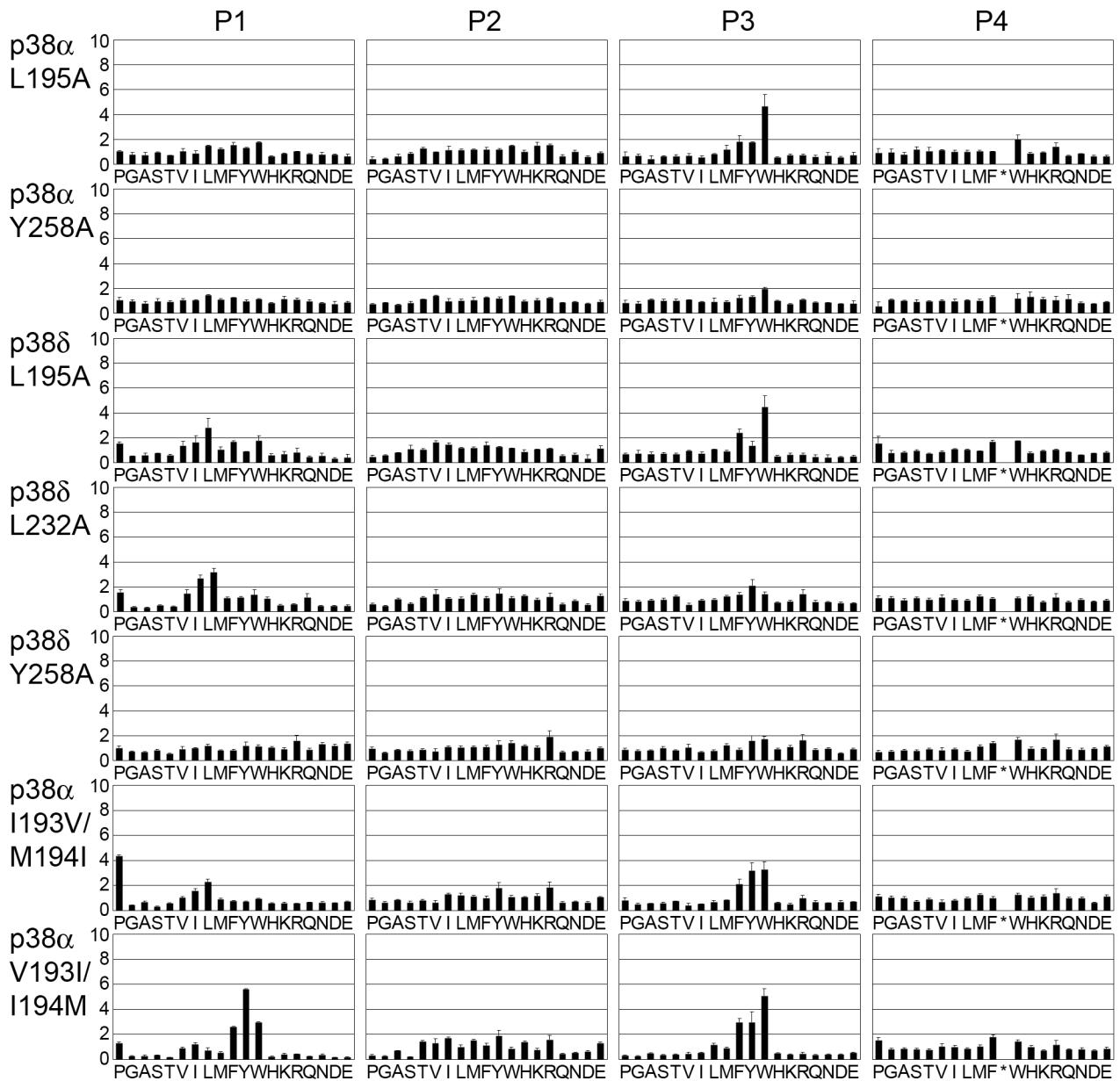


Supplementary Figure 1. Quantification of DEF peptide library phosphorylation by MAPKs. Histograms depict the relative phosphorylation of each peptide in the DEF peptide library as quantified by phosphor imaging using ImageQuant 5.0. The selectivity value is calculated as the level of phosphorylation of a given peptide divided by the average level of phosphorylation for all 19 peptides with amino acid substitutions at that position. The P4 Tyr peptide was not included due to failed synthesis (space indicated with an asterisk). Error bars represent the standard deviation from three separate experiments.



Supplementary Figure 2. Quantification of DEF peptide library phosphorylation by p38 DEF site interaction pocket mutants. Histograms depict the relative phosphorylation of each peptide in the DEF peptide library as quantified by phosphor imaging using ImageQuant 5.0. The selectivity value is calculated as the level of phosphorylation of a given peptide divided by the average level of phosphorylation for all 19 peptides with amino acid substitutions at that position. The P4 Tyr peptide was not included due to failed synthesis (space indicated with an asterisk). Error bars represent the standard deviation from three separate experiments.