

## Supplementary File 2 (File S2)

Two Sample Logo (TSL) for two window sizes 21 and 27:

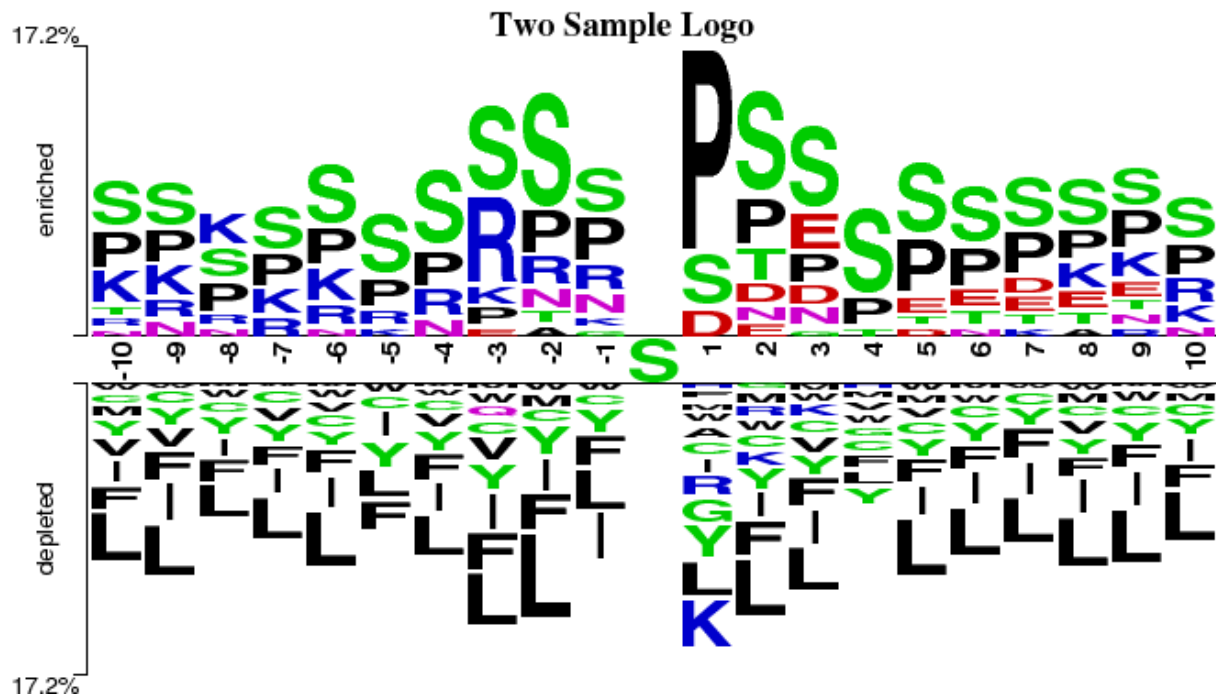


Figure S1: Incidence of amino acid propensities of positive (phosphorylation site) and negative (non-phosphorylation site) windows of size 21 in positions of ~-10 to +10 windows.

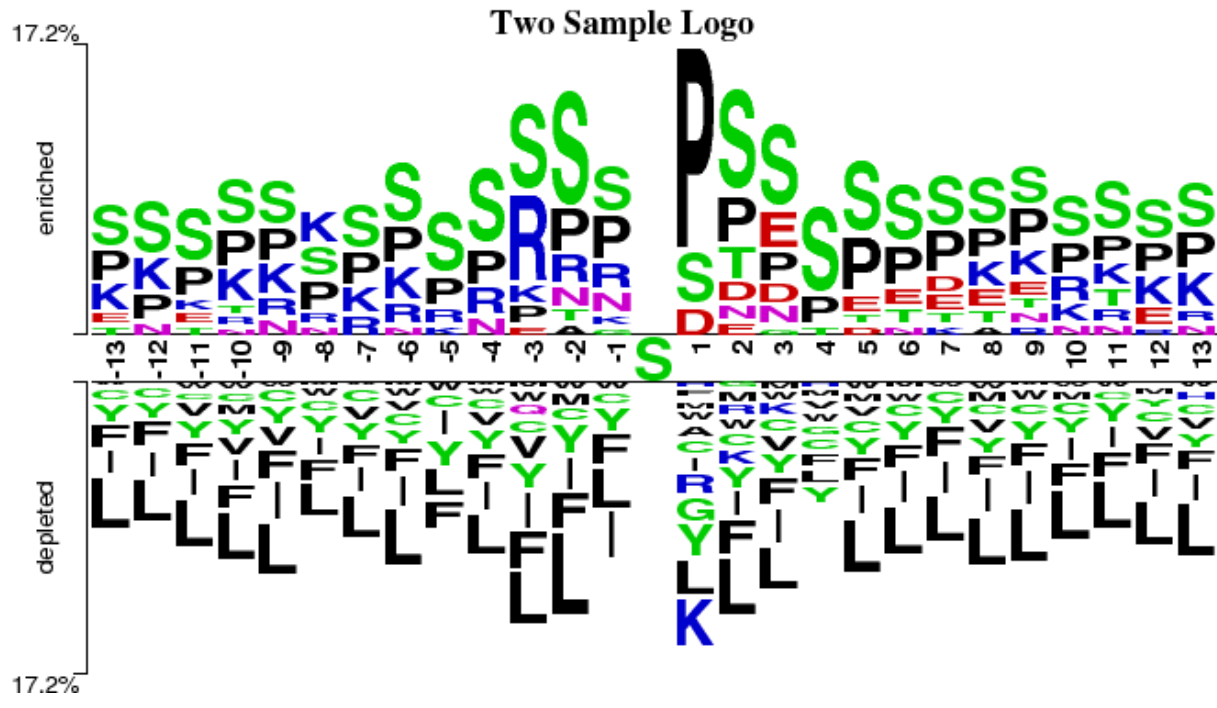
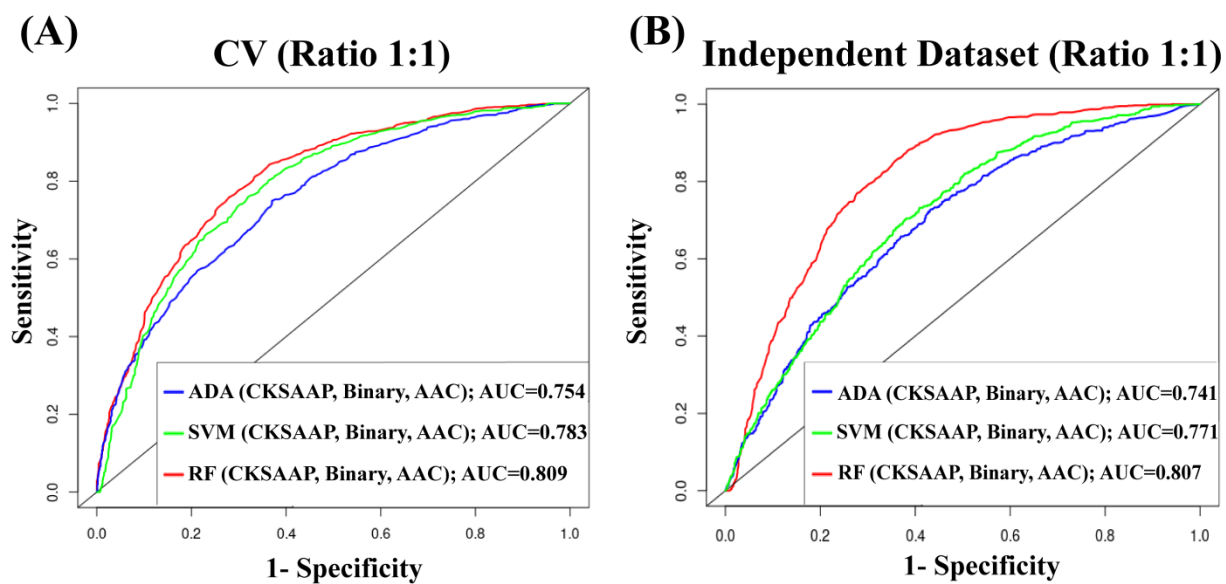
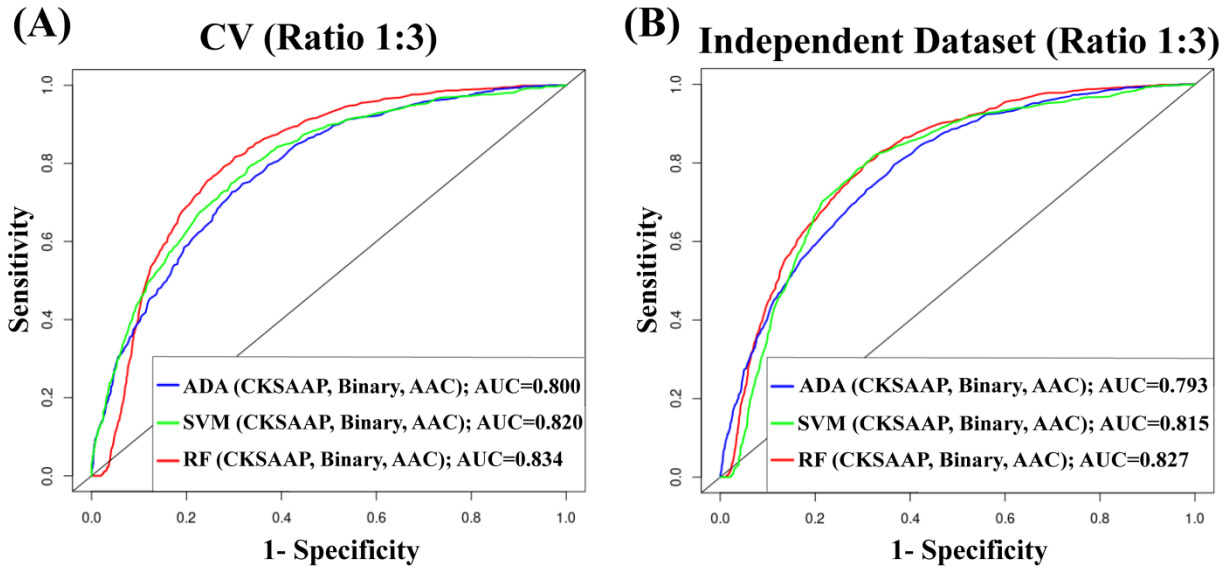


Figure S2: Incidence of amino acid propensities of positive (phosphorylation site) and negative (non-phosphorylation site) windows of size 27 in positions of ~-13 to +13 windows.



**Figure S3: ROC curves for the best prediction models with ADA, SVM, and RF that were trained by the 1:1 ratio of positive and negative samples. (a) Performance curves for the best prediction models with ADA, SVM, and RF by 5-fold CV (b) Independent test performance curves for the best prediction models with ADA, SVM, and RF.**



**Figure S4: ROC curves for the best prediction models with ADA, SVM, and RF that were trained by the 1:3 ratio of positive and negative samples. (a) Performance curves for the best prediction models with ADA, SVM, and RF by 5-fold CV (b) Independent test performance curves for the best prediction models with ADA, SVM, and RF.**