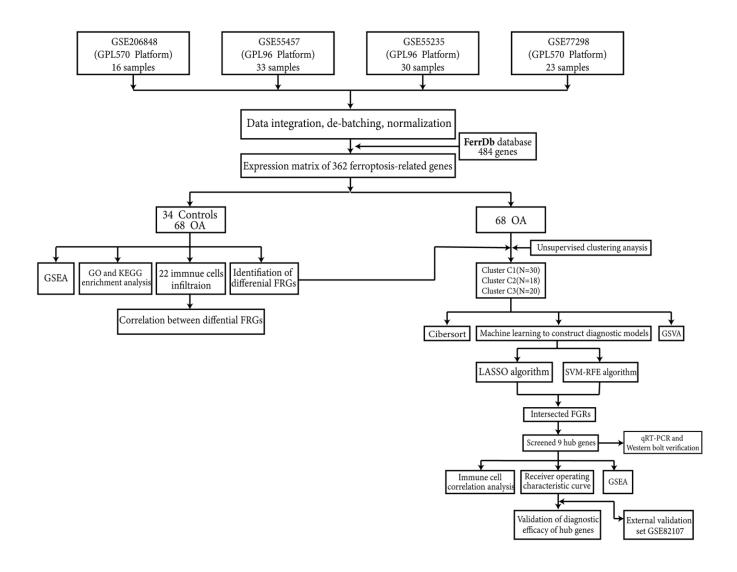
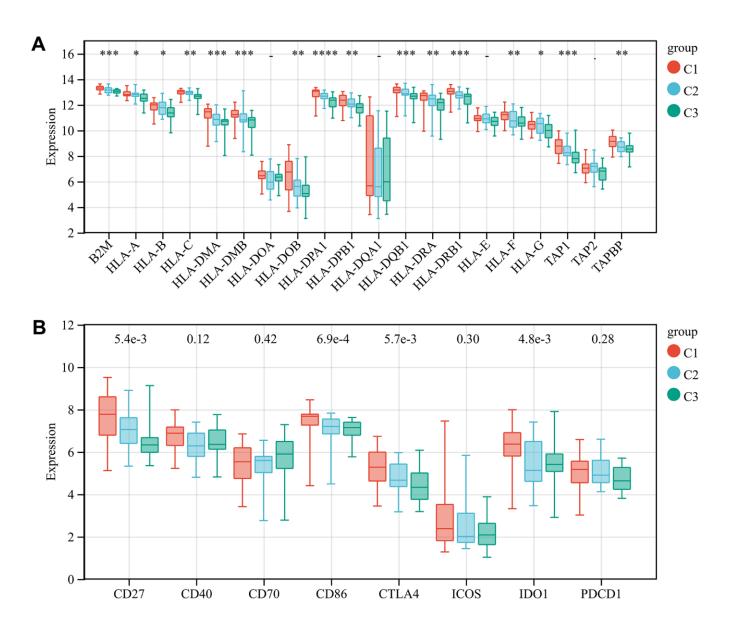
SUPPLEMENTARY FIGURES



Supplementary Figure 1. The overall flow chart for this analysis.



Supplementary Figure 2. Significance analysis of immune checkpoint and HLA family genes in different subclusters. The distribution of expression levels of HLA family genes (**A**) and immune checkpoint genes (**B**) in samples of different subtype groups is displayed. pvalue<0.0001: "***", pvalue<0.001: "***", pvalue<0.05: "*".