

# Supplementary materials

(Supplementary Figure 1-4)

**Supplementary Figure 1** (a) KEGG analysis for the 253 up-regulated genes. (b) GO analysis for the 61 down-regulated genes. (c) KEGG analysis for the 61 down-regulated genes.

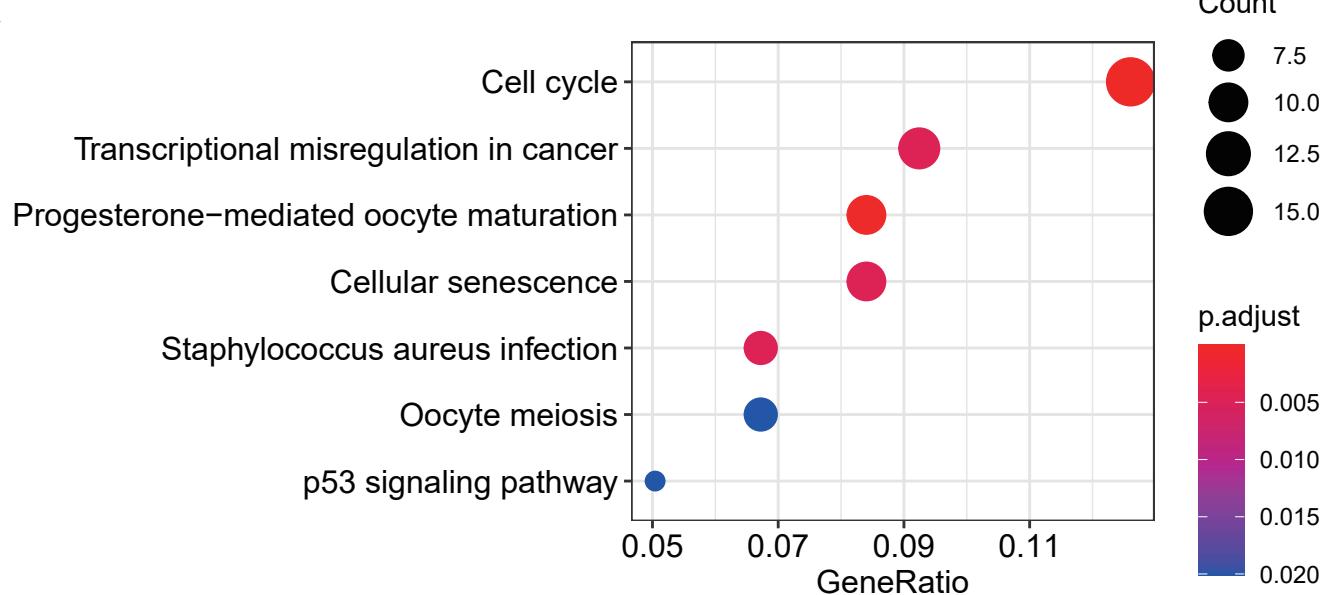
**Supplementary Figure 2** PPI network for the total 314 genes

**Supplementary Figure 3** (a) Selection for the best power value.  $R^2$  threshold was set to 0.8. (b) KEGG analysis for the genes in grey module.

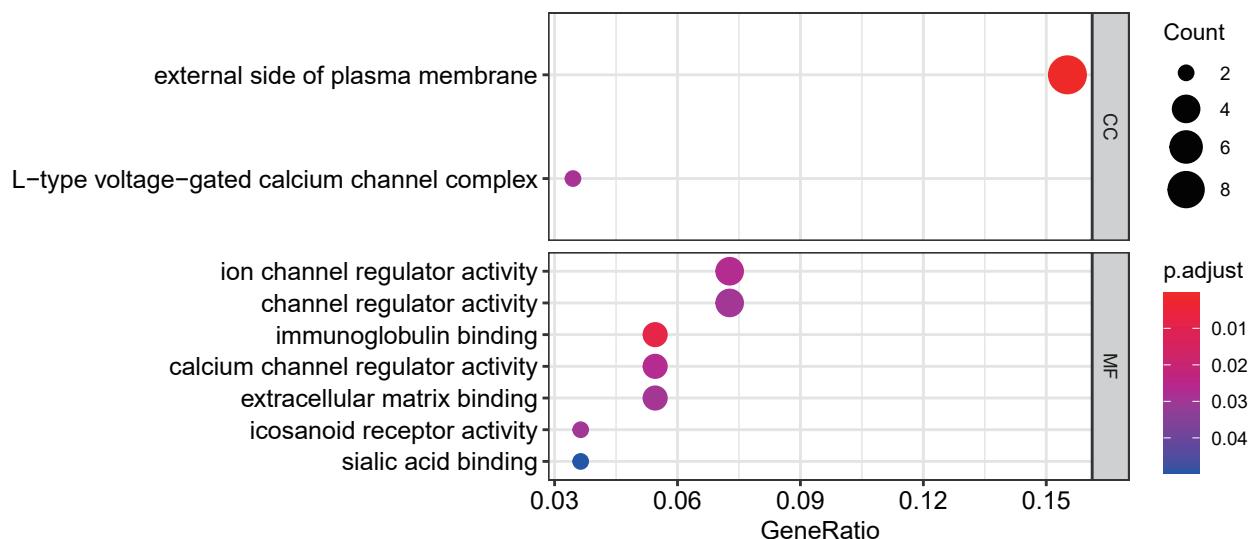
**Supplementary Figure 4** (a) Correlation between the 31 genes in the signature and 28 immune cells evaluated by ssGSEA. (b) Correlation between the 31 genes in the signature and 22 immune cells evaluated by CIBERSORT.

Supplementary Figure 1

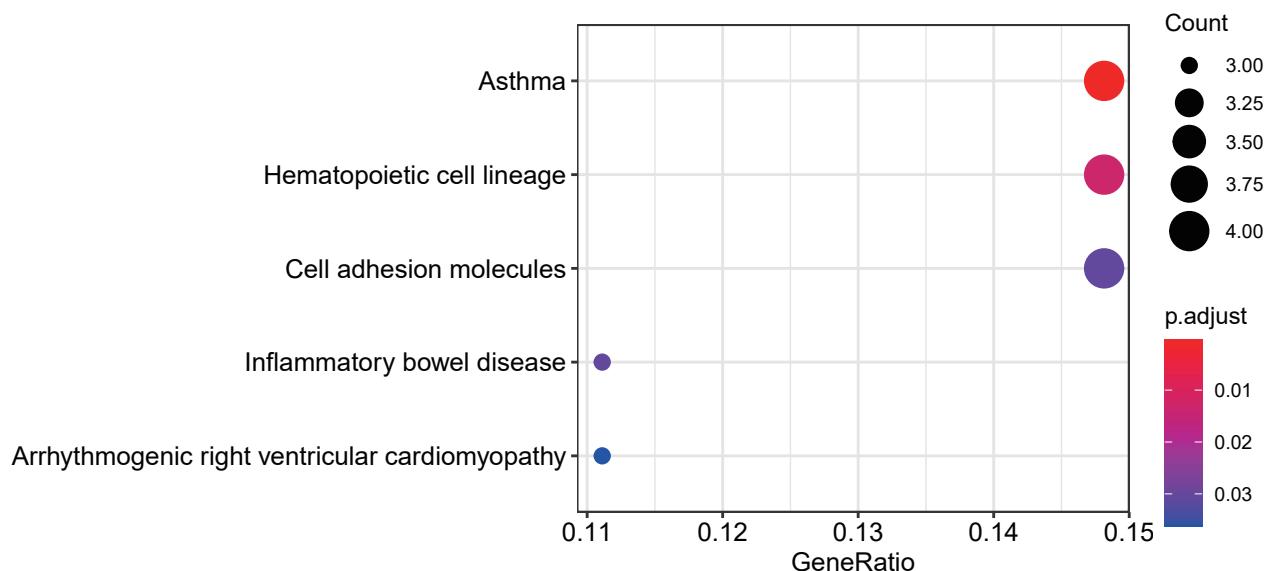
a



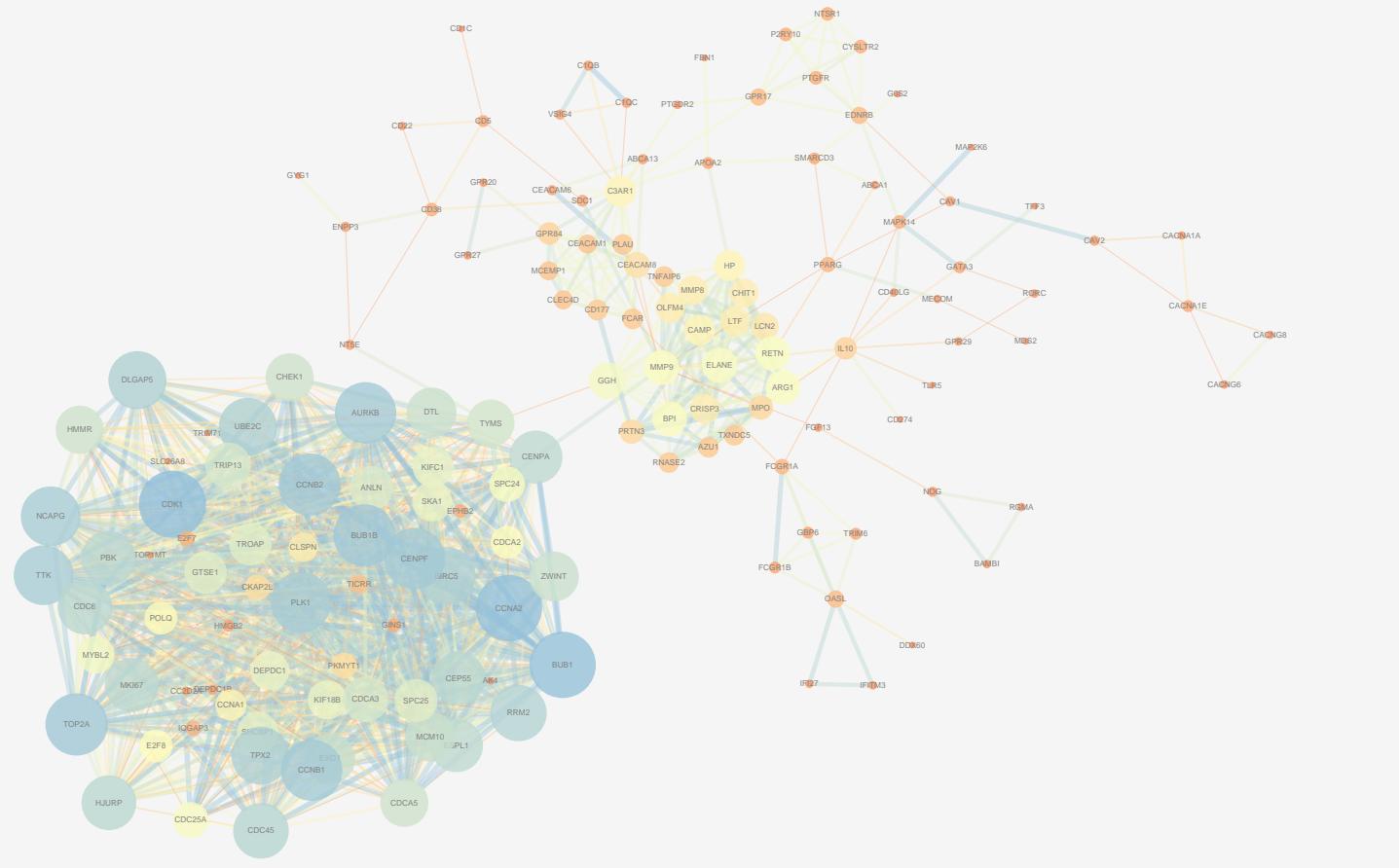
b



c

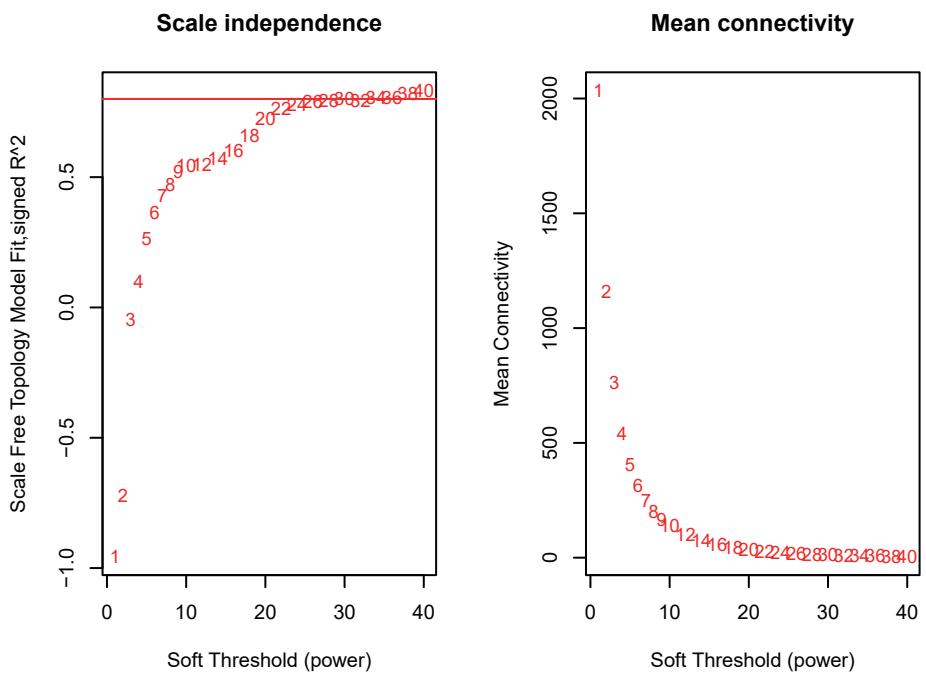


## Supplementary Figure 2

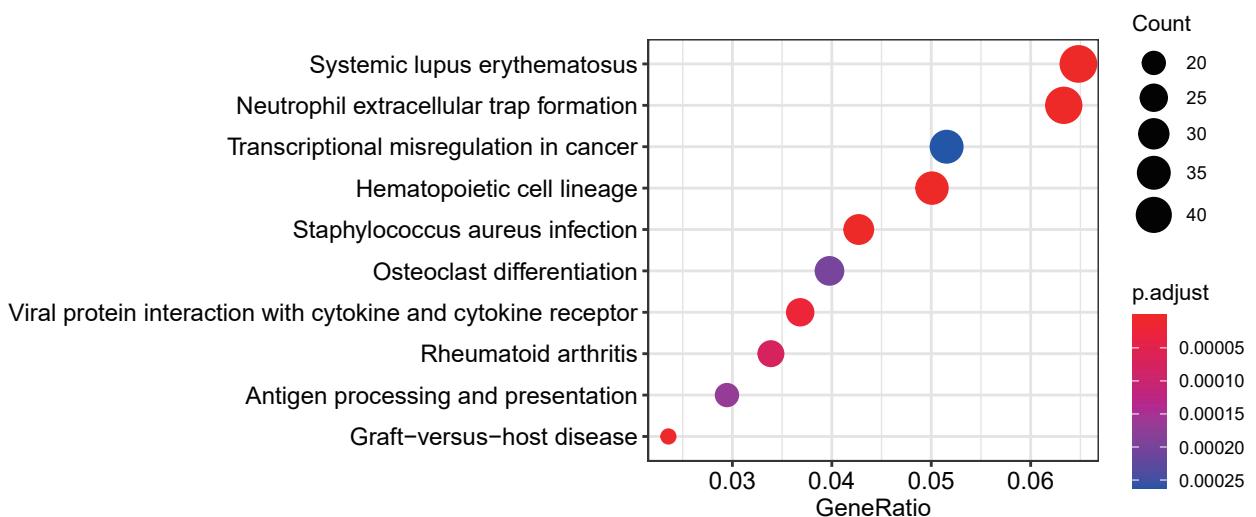


### Supplementary Figure 3

a

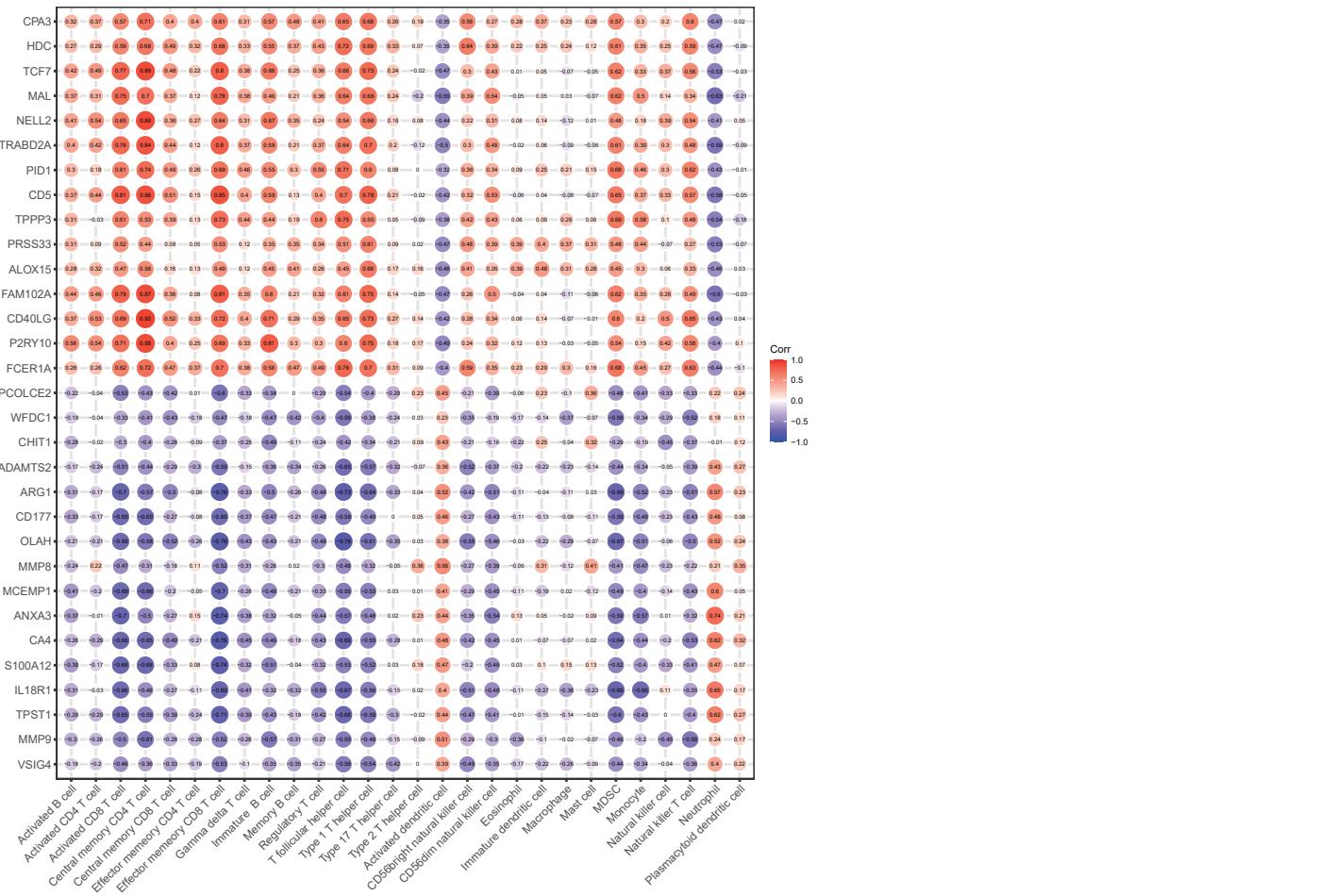


b



# Supplementary Figure 4

a



b

