**Supplementary Figure Legends**

**Supplementary Figure S1.** Signaling pathway and mechanism of RAD51AP1. A-H) Correlation analysis between key genes of the PI3K/AKT and NF-κB signaling axis and RAD51AP1. Scatter plots show that RAD51AP1 is significantly associated with key genes in PI3K/AKT and NF-κB signaling axis (p < 0.05).