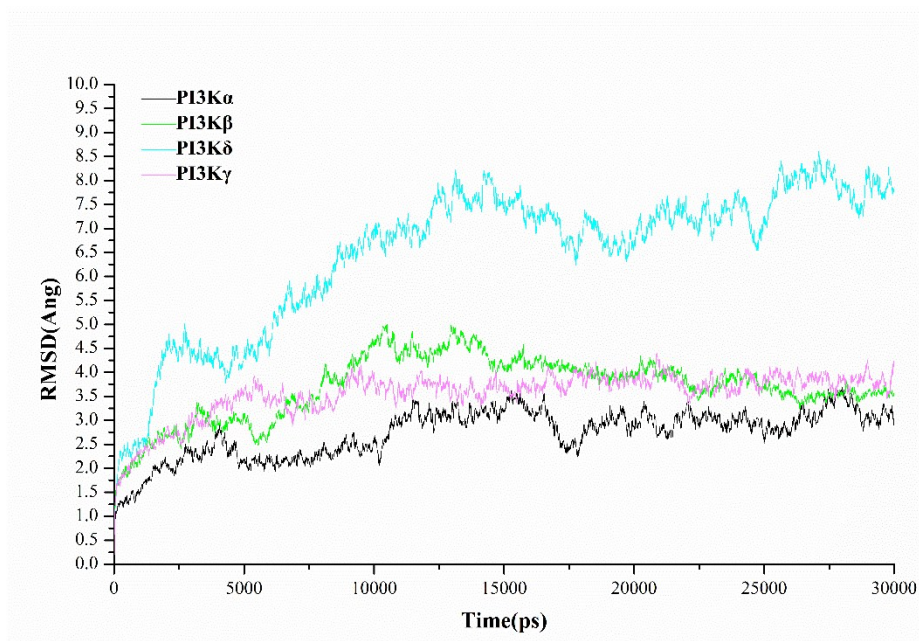
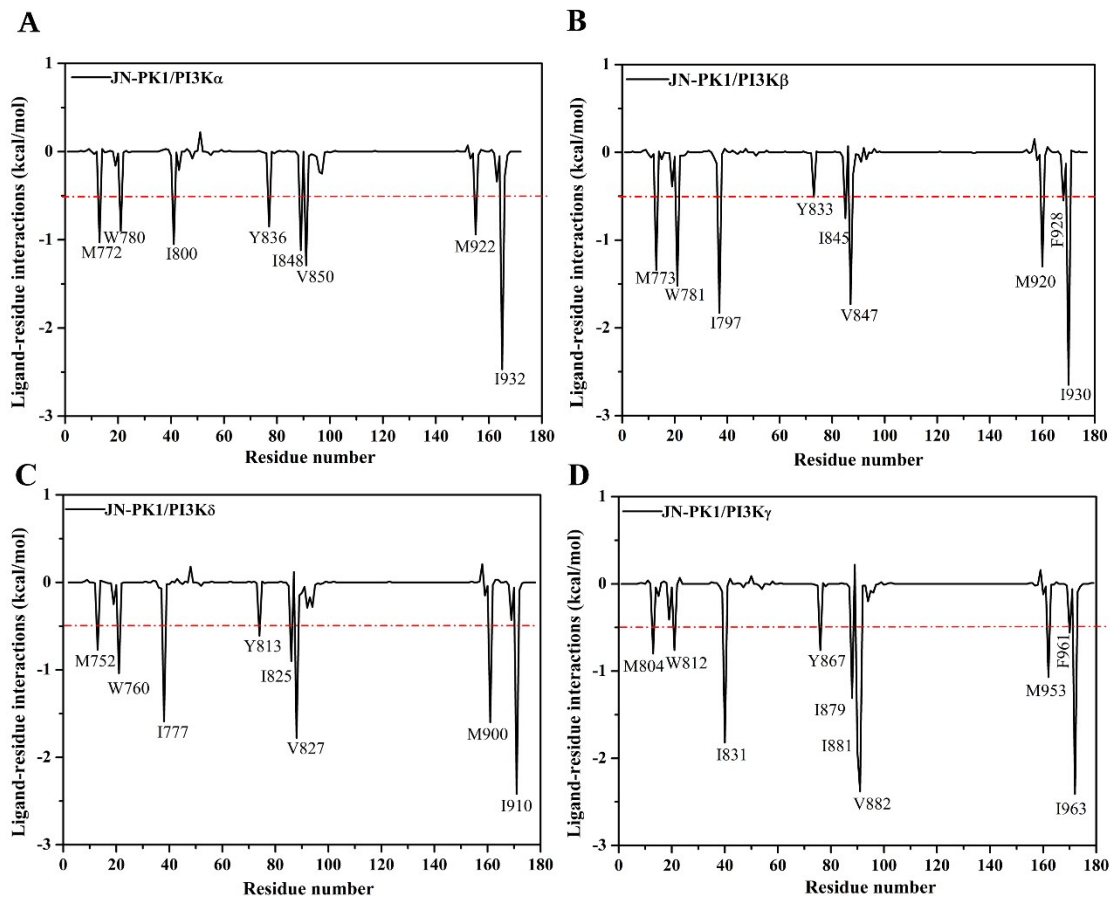


**Figure S1.** The 2D presentations of the interactions between JN-PK1 and PI3K $\alpha$  (A)/PI3K $\beta$  (B)/PI3K $\delta$  (C).



**Figure S2.** The root-mean-square deviations (RMSDs) of the binding pockets of the PI3K kinase/JN-PK1 complexes.



**Figure S3.** The JN-PK1-residue interaction spectra for PI3K $\alpha$  (A)/ PI3K $\beta$  (B)/ PI3K $\delta$  (C)/ PI3K $\gamma$  (D).