**Involvement of NF-κB signaling pathway in the regulation of PRKAA1-mediated tumorigenesis in gastric cancer**

**Gastric cancer**

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**Running head: PRKAA1 and NF-κB signaling**

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**Figure S1.** NF-κBp50 knockdown and overexpression in GC cell lines. BGC-823 and MKN-45 cells were transfected with siRNA targeting NF-κBp50, and the expression levels of NF-κBp50 were measured by Quantitative Real-time PCR (A, B) and Western blot assay (C, D), respectively. BGC-823 and MKN-45 cells were infected with pLVX-Puro-NF-κBp50 and the expression of NF-κBp50 was measured by Quantitative Real-time PCR (E, F) and Western blot assay (G, H), respectively. \*\**P*<0.01 compared with corresponding siNC or Vector.

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**Figure S2.** PRKAA1 silencing inhibits NF-κBp50 overexpression-mediated GC cell migration and invasion. NF-κBp50 overexpression in MGC-803 cells significantly increased the NF-κBp50 protein expression (A, B). PRKAA1 knockdown in MGC-803 cells significantly decreased the PRKAA1 protein expression (C, D). MGC-803 cells were infected with pLVX-Puro-NF-κBp50 in the absence or presence of PRKAA1-shRNA transfection. Transwell assay was performed for examining the cell migration and invasion (E), and the protein expression of MMP-2, p-NF-κBp65 and NF-κBp65 was measured by Western blotting (F). Scale bars: 100 μm. \*\**P*<0.01 compared with corresponding Vector or shNC. ##*P*<0.01 compared with NF-κBp50.