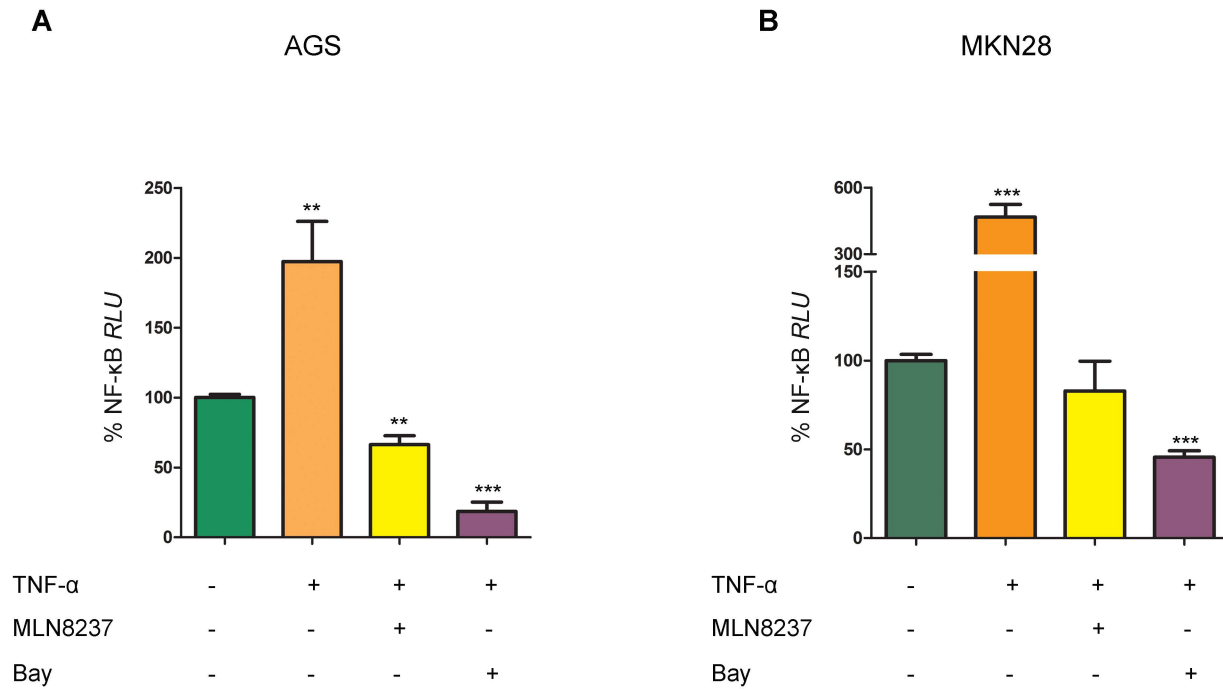


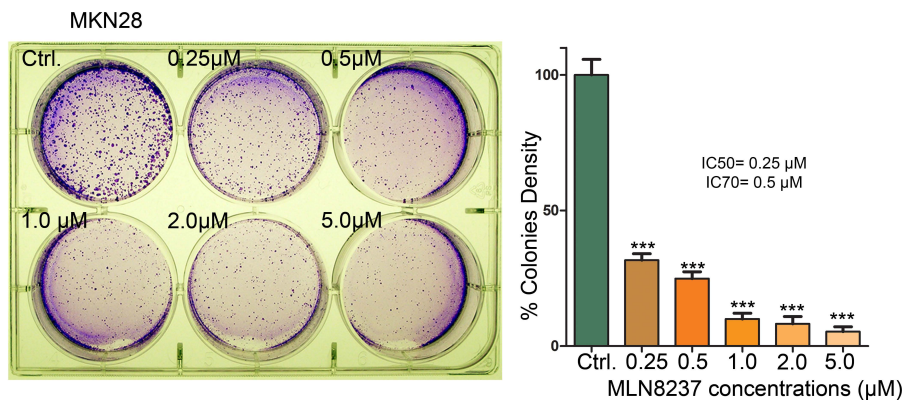
# Supplementary Figure 1: AURKA inhibition attenuates TNF- $\alpha$ induced activation of NF- $\kappa$ B



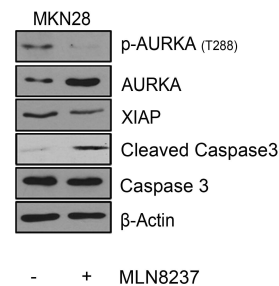
NF- $\kappa$ B reporter assay was performed in AGS (A) and MKN28 (B) cells with TNF- $\alpha$  treatment alone and with MLN8237 or Bay for 6h. The results showed that AURKA inhibition prevented TNF- $\alpha$  activation of NF- $\kappa$ B.

## Supplementary Figure 2: Inhibition of AURKA with MLN8237 reduces survival of gastric cancer cells

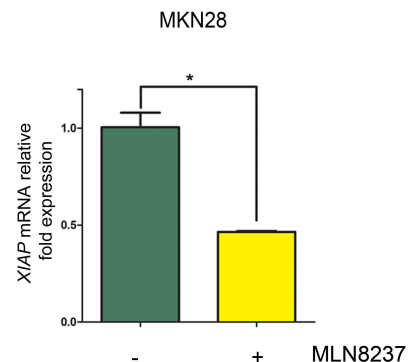
**A**



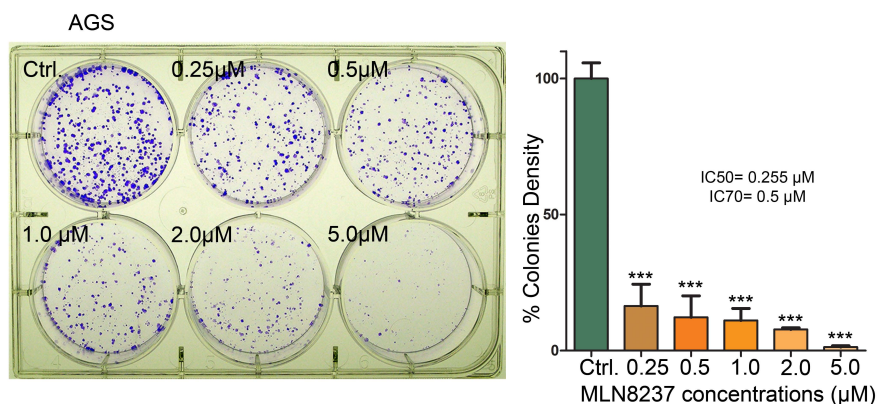
**B**



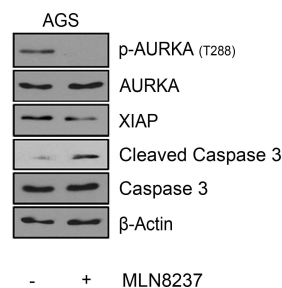
**C**



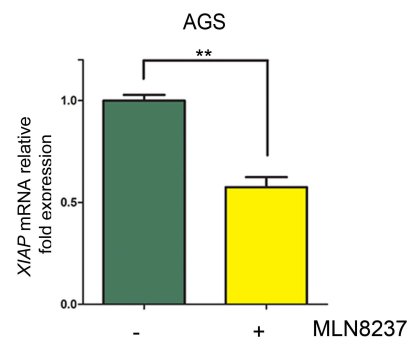
**D**



**E**



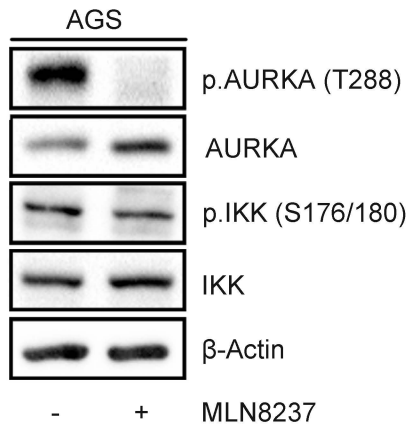
**F**



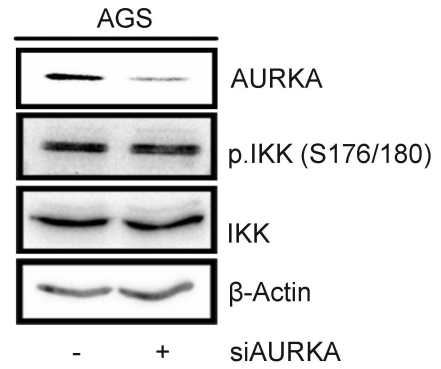
MKN28 (A) and AGS (D) cells were seeded at low density and treated with vehicle or the indicated concentrations of MLN8237 for 24h. Cells were then cultured in complete medium for 10 days. Graphs show the colonies density relative to vehicle-treated controls (right panels). MKN28 (B) and AGS (D) cells were treated with MLN8237 for 48h and proteins were collected and analyzed by Western blotting for XIAP, p-AURKA, AURKA, caspase-3, and cleaved caspase-3. Real-time RT-PCR analysis of XIAP in MKN28 (C) and AGS (F) after MLN8237 (0.5 μM) treatment for 48h was performed.

**Supplementary Figure 3: Pharmacological inhibition or genetic knockdown of AURKA has no effect on phosphorylation of IKK proteins**

**A**

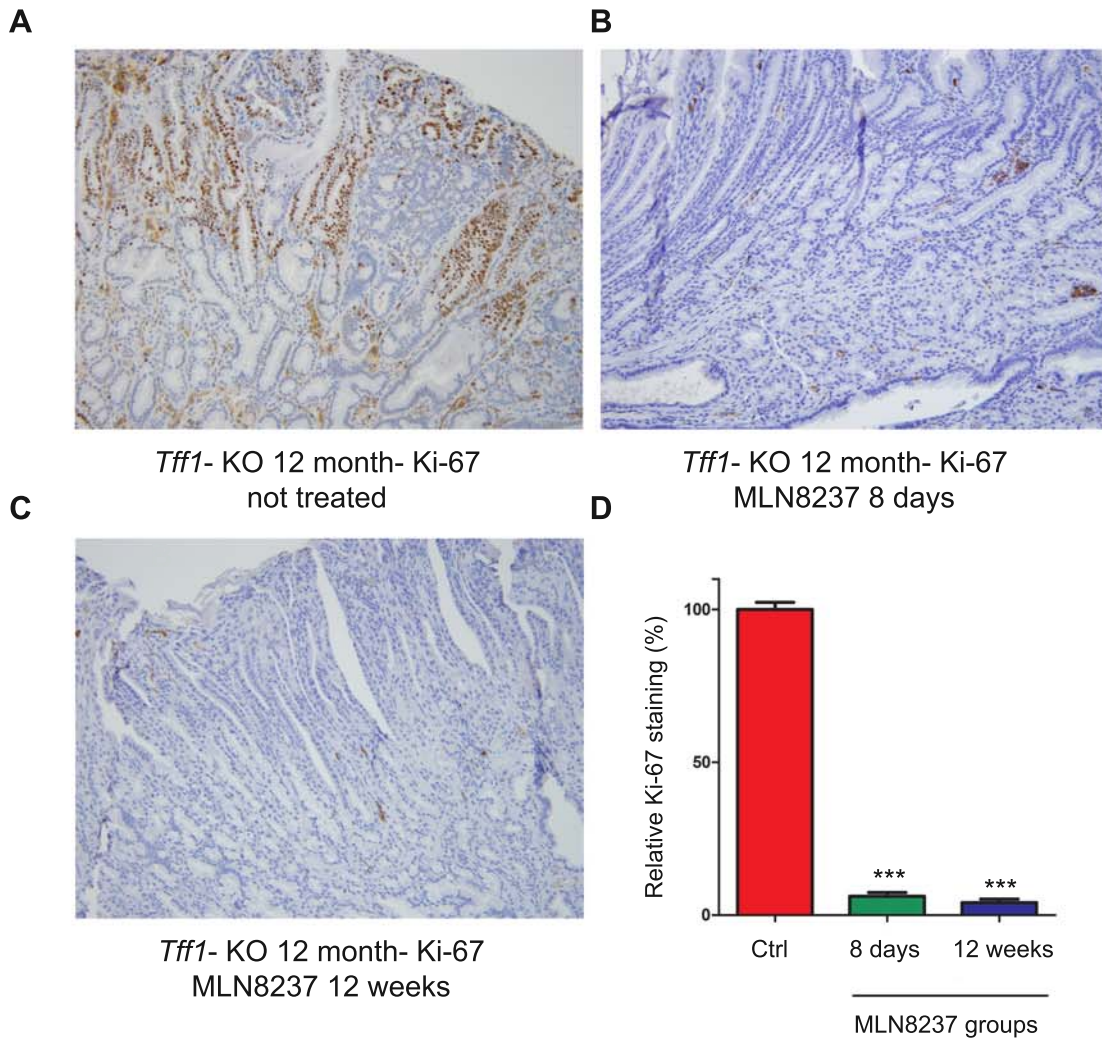


**B**



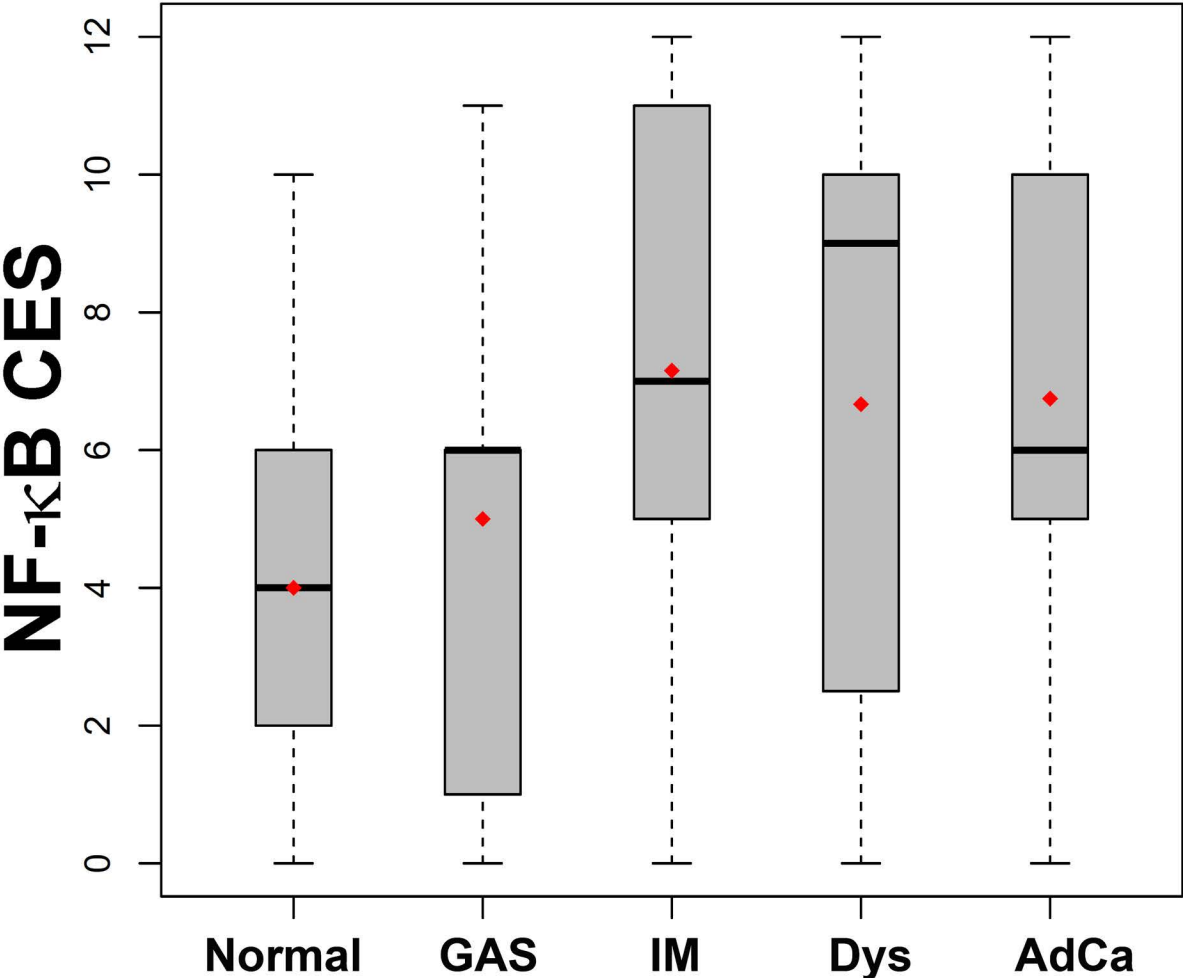
A) AGS cells were treated with MLN8237 (0.5 μM) and subjected to Western blotting analysis for the indicated proteins. B) Western blot analysis of the indicated proteins in AGS cells after knocking down AURKA with siRNA.

Supplementary Figure 4: Ki-67 expression in *Tff1*-knockout mice after MLN8237 treatment



A) Representative images of immunohistochemical analysis of Ki-67 protein expression in control (A) or MLN8237-treated (B&C) *Tff1*-knockout animals. D) Quantification of Ki-67 expression.

Supplementary Figure 5: NF-κB is overexpressed in histological stages of human gastric tumorigenesis



The graph summarizes the NF-κB immunohistochemical staining results on gastric tissues that are shown in Figure 7D. Horizontal bars indicate the median whereas red dots depict the mean. Normal, normal gastric glands; GAS, gastritis; IM, intestinal metaplasia; Dys, dysplasia; AdCa, adenocarcinoma. NF-κB was significantly overexpressed in all stages of gastric tumorigenesis ( $P < .01$ ).