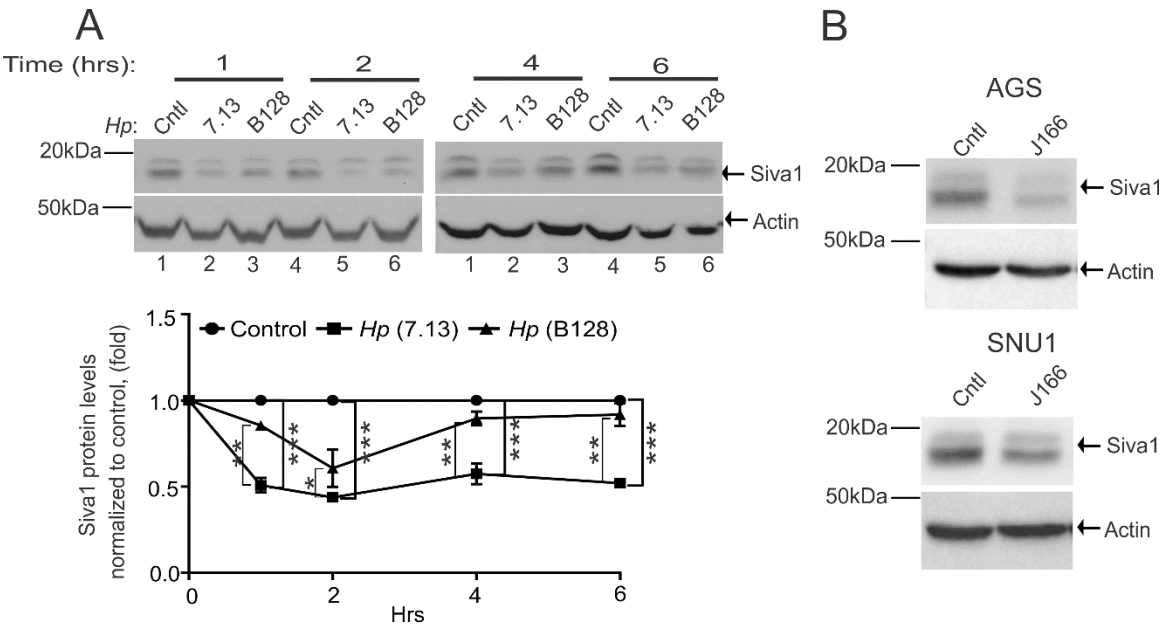
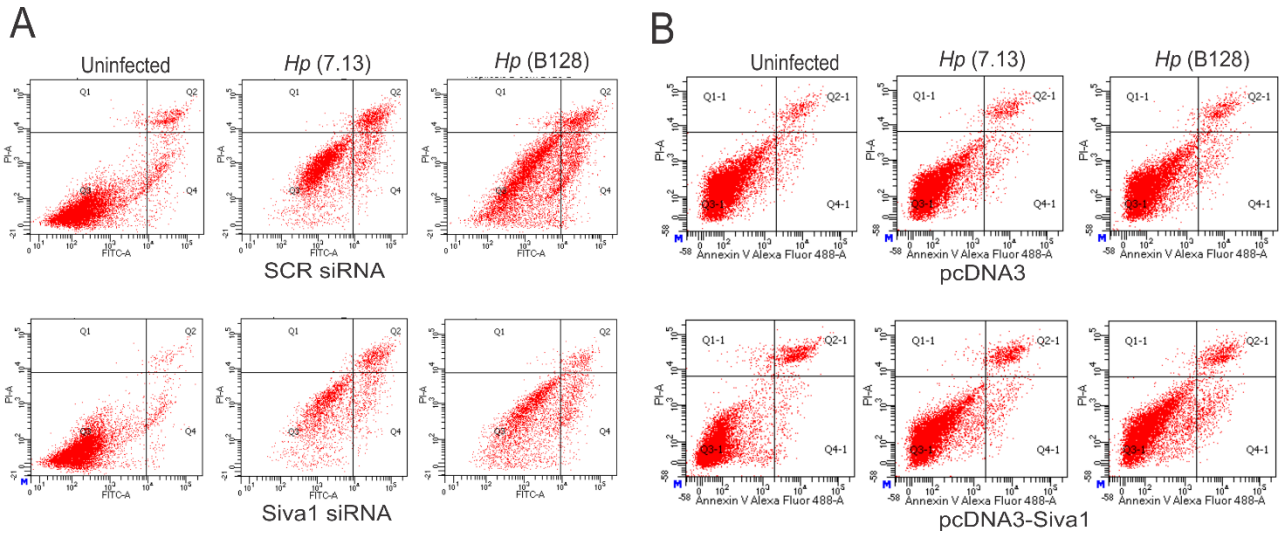


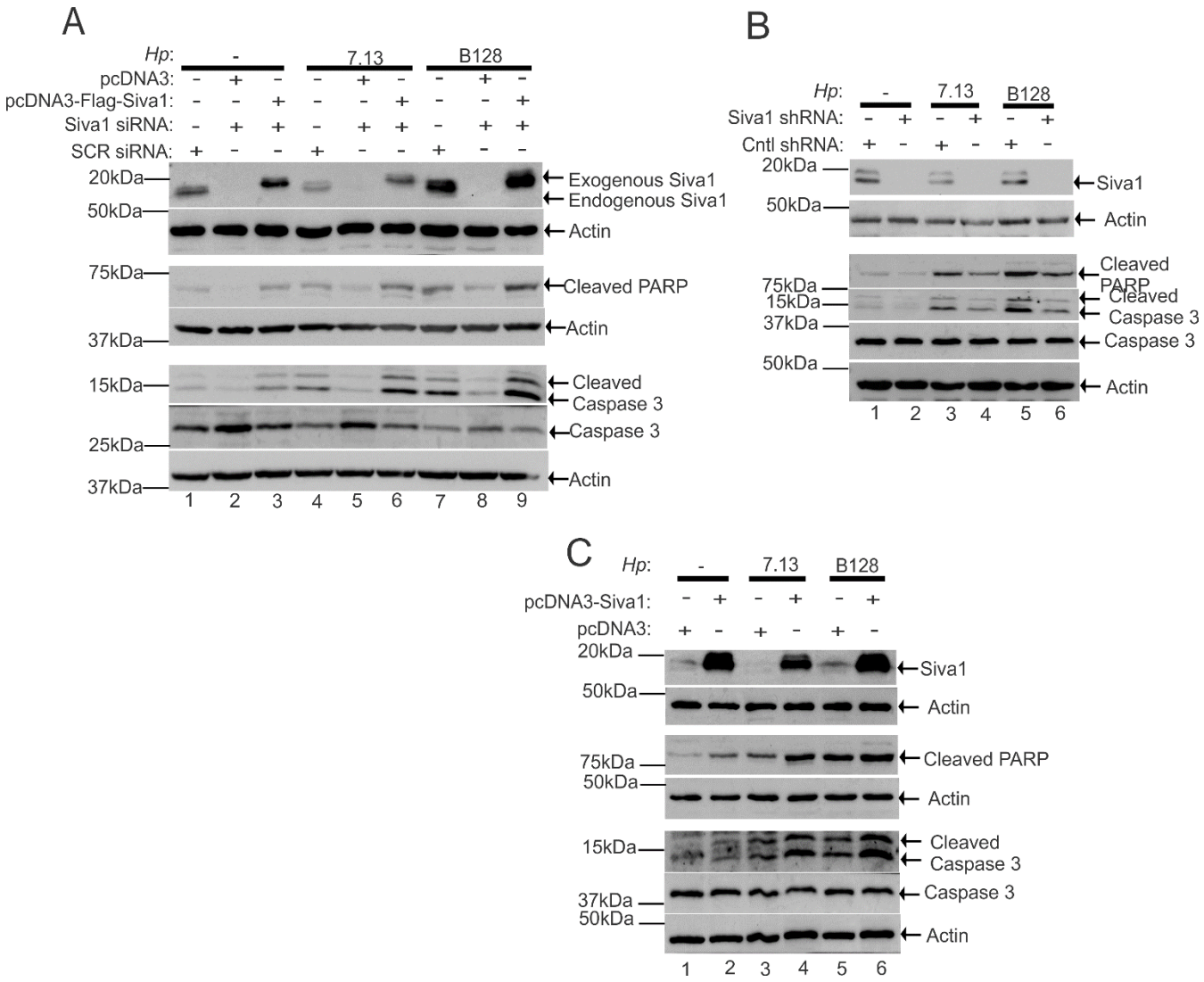
Supplementary Figure 1.

(A) Western blot analysis of Siva1 protein expression following co-culture of SNU1 cells with *H. pylori* strains 7.13 and B128 for the indicated time. The graph panel shows quantification of Siva1 protein by densitometry, normalized to actin. Expression of Siva1 protein at zero time point was arbitrarily set at 1. (B) Western blot analysis of Siva1 protein in AGS (top panel) and SNU1 (bottom panel) cells co-cultured with *H. pylori* strain J166. Statistical analysis was performed using one-way ANOVA followed by Tukey's multiple comparison test. Data are displayed as mean ± SE, (*p < 0.05; **p < 0.01; ***p < 0.001) and representative of three independent experiments.



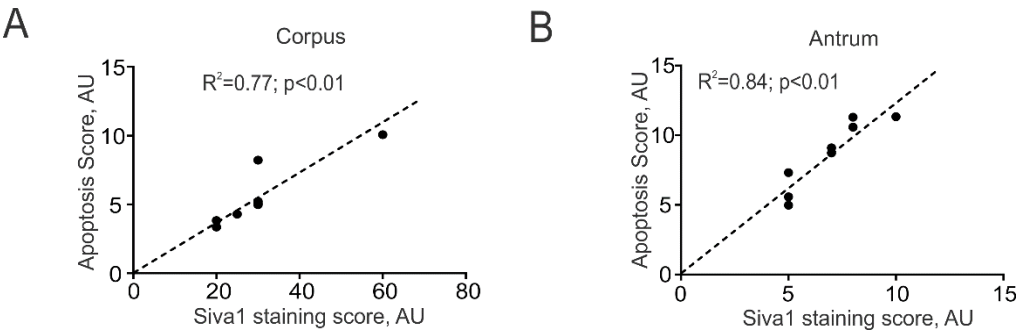
Supplementary Figure 2.

(A) Representative flow cytometry scatter plots showing the percentage of apoptotic cells after transfection of AGS cells with Siva1 siRNA or scrambled siRNA and then either left uninfected or co-cultured with *H. pylori* strains 7.13 or B128 for 18 hours. (B) Representative flow cytometry scatter plots showing the percentage of apoptotic cells after transfection of AGS cells with pcDNA3-FLAG-Siva1 expression plasmid or empty pcDNA3 vector and then either left uninfected or co-cultured with *H. pylori* strains 7.13 or B128 for 18 hours. See Figure 2 for statistical analyses.



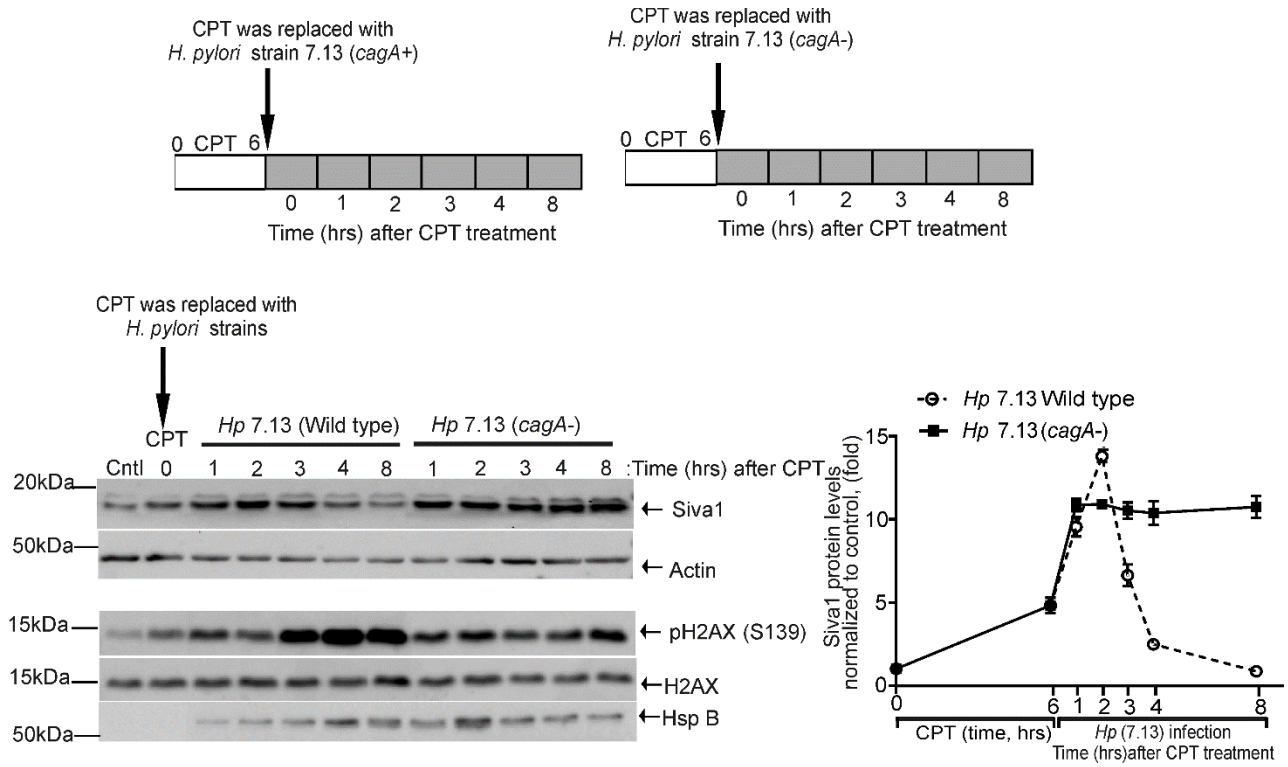
Supplementary Figure 3.

(A) siRNA rescue experiment. Apoptosis markers (cleaved PARP1 and caspase-3) were analyzed by Western blotting after co-cultured of AGS cells with *H. pylori* strains 7.13 or B128 for 18 hours. Prior to infection, cells were transfected with siRNA targeting the 3'UTR of Siva1 mRNA or control scrambled siRNA and co-transfected with either empty vector (pcDNA3) or Siva1 expression plasmid (pcDNA3-FLAG-Siva1), as indicated at the top of the panel. Due to the FLAG-tag, exogenous and endogenous Siva1 proteins have slightly different molecular weights. (B) Western blot analyses of apoptosis markers (cleaved PARP1 and caspase 3) in AGS cells stably transfected with Siva1 shRNA or control shRNA and co-cultured with *H. pylori* strains 7.13 or B128 for 18 hours. (C) Western blot analysis of apoptosis markers (cleaved PARP1 and caspase 3) in AGS cells co-cultured with *H. pylori* strains 7.13 or B128 for 18 hours. Prior to analyses, cells were stably transfected with Siva1 expression vector (pcDNA3-Siva1) or empty control vector (pcDNA3), as described in the Materials and Methods section. Experiments were repeated three times; representative blots are shown.



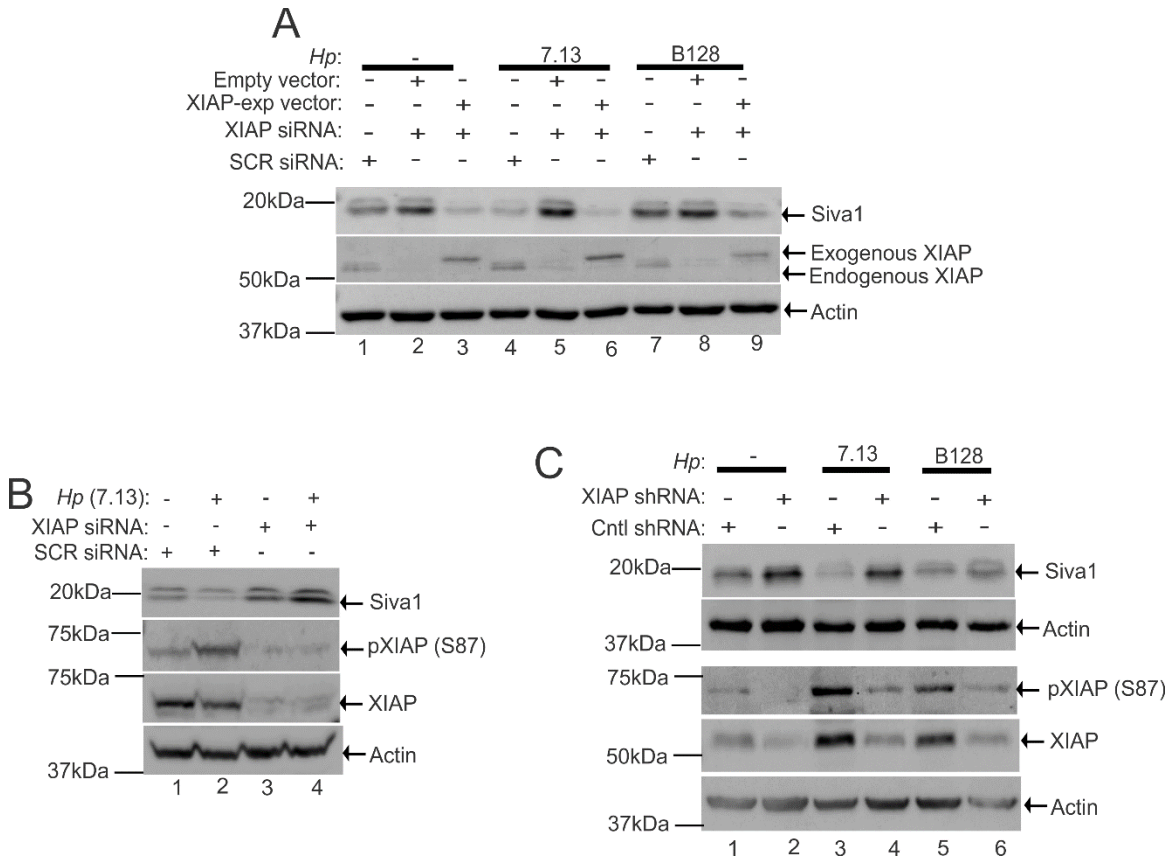
Supplementary Figure 4.

Correlation analysis of apoptosis and Siva1 IHC scores in the gastric mucosa collected from mice infected with *H. pylori* strain PMSS1 for 8 weeks. Apoptotic cells were identified using TUNEL-staining as described in the Materials and Methods section. Panels (A) and (B) shows the corpus and the antrum, respectively. Correlation between Siva1 protein expression and apoptosis was assessed using Pearson's Correlation analysis (n=8; R^2=0.84, p<0. 01 (corpus); R^2=0.77, p<0. 01 (antrum).



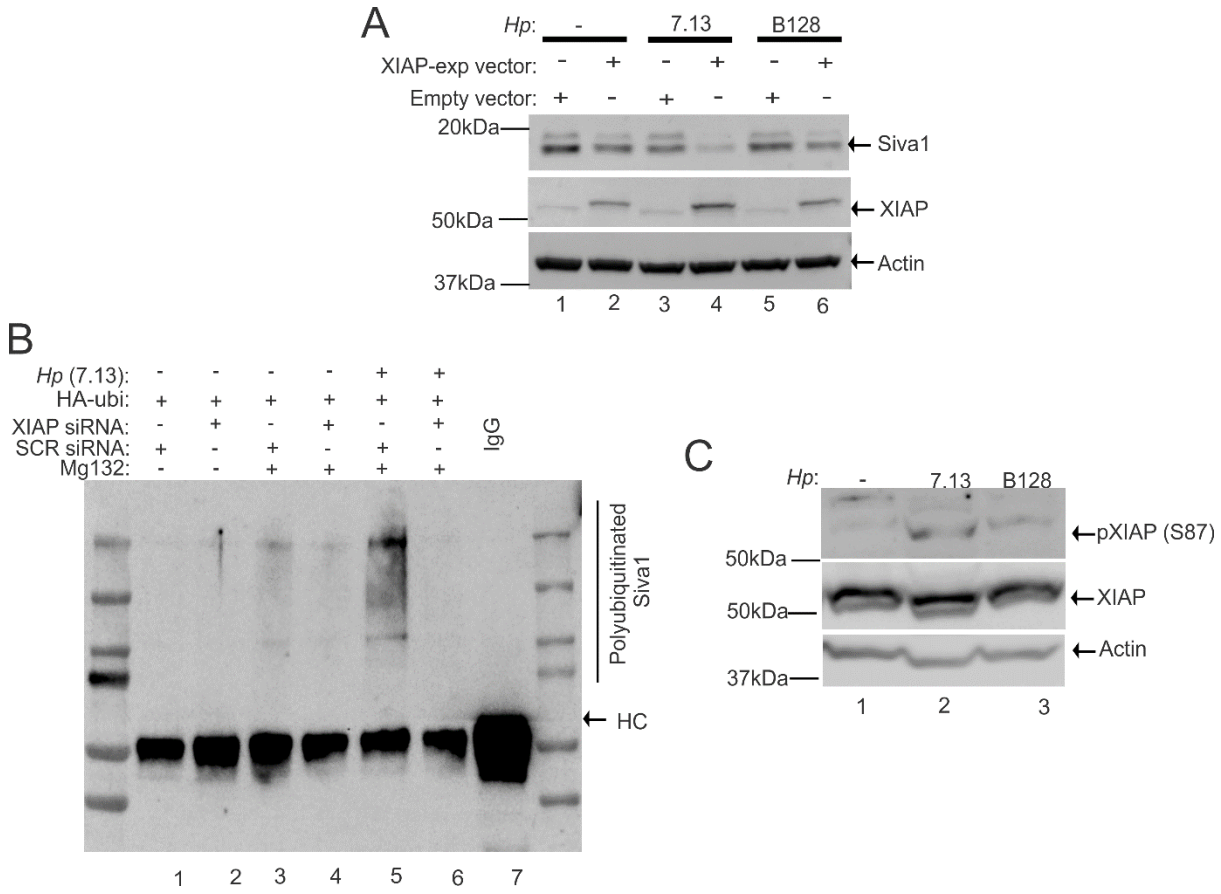
Supplementary Figure 5.

Western blot analysis of Siva1 and pH2AX(S139) proteins in DNA-damaged cells. AGS cells were treated with DNA damaging drug camptothecin (50 nM) for 6 hours. Drug was then removed and cells were co-cultured with *H. pylori* strain 7.13 or its isogenic mutant *cagA*- for the indicated time. Cellular lysates were analyzed using Western blotting. The graph panel shows quantification of Siva1 protein by densitometry, normalized to actin (n=3; mean ± SE). Expression of Siva1 protein in untreated cells was arbitrarily set at 1. Upper panels show the experimental design.



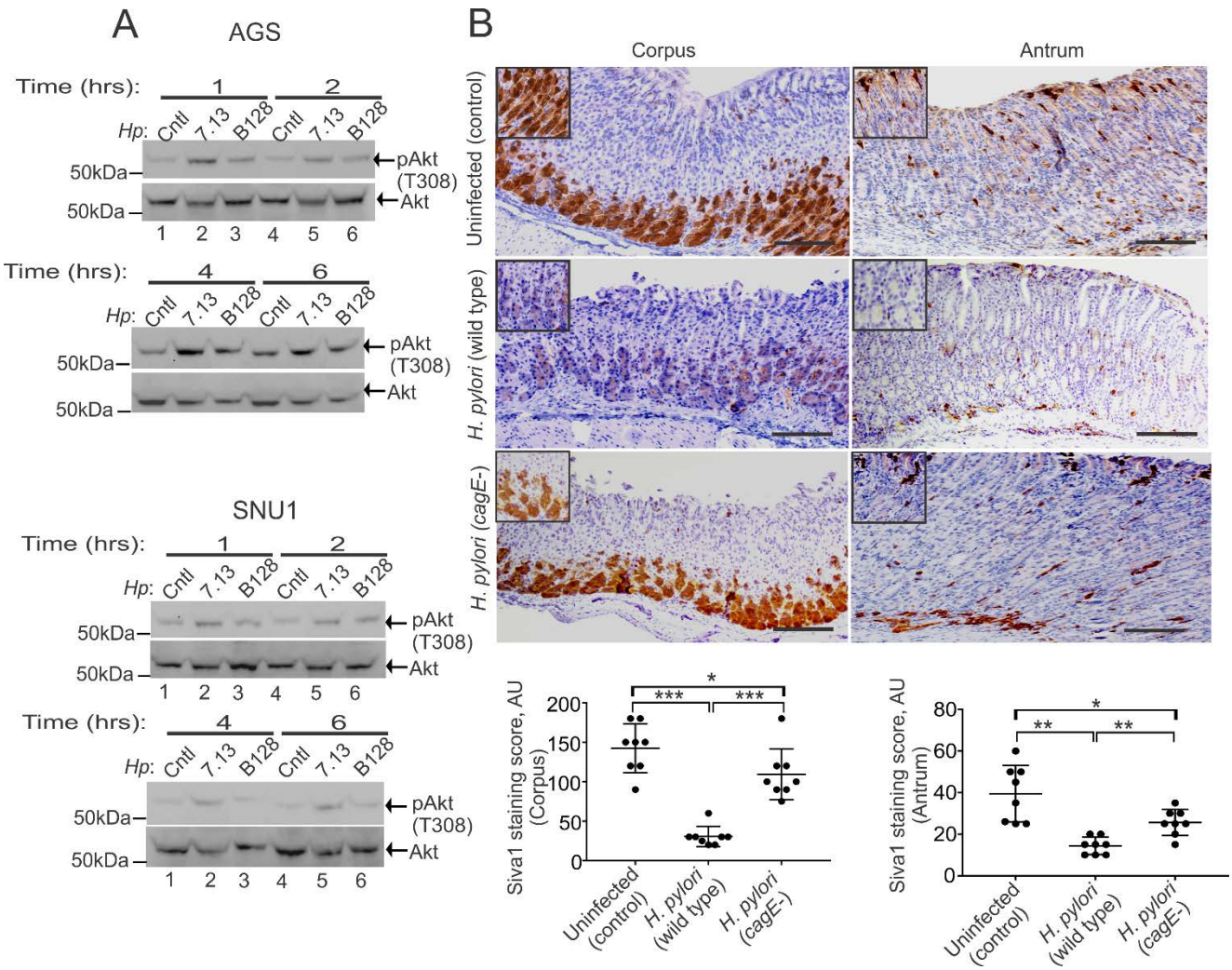
Supplementary Figure 6.

(A) siRNA rescue experiment. Western blot analysis of Siva1 protein in AGS cells co-cultured with *H. pylori* strains 7.13 or B128 for 4 hours. Prior to infection, cells were transfected with siRNA targeting the 3'UTR of XIAP mRNA or control scrambled siRNA and co-transfected with either empty vector or FLAG-XIAP expression plasmid, as indicated at the top of the panel. Due to the FLAG-tag, exogenous and endogenous XIAP proteins have slightly different molecular weights. (B) Western blot analysis of Siva1 protein expression in AGS cells co-cultured with *H. pylori* strain 7.13 for 4 hours. Prior to infection, cells were transfected with XIAP siRNA. (C) Western blot analyses of Siva1 protein in AGS cells stably transfected with XIAP shRNA or control shRNA and co-cultured with *H. pylori* strains 7.13 or B128 for 4 hours. Each experiment was repeated three times; representative blots are displayed.



Supplementary Figure 7.

(A) Western blot analysis of Siva1 protein in AGS cells co-cultured with *H. pylori* strains 7.13 or B128 for 4 hours. Prior to experiments, cells were stably transfected with XIAP expression vector or empty control vector as described in the Materials and Methods section. (B) Western blot analysis of Siva1 protein ubiquitination in AGS cells treated as indicated at the top of the panel. Ubiquitination of Siva1 was analyzed with HA-tag antibody after Siva1 protein immunoprecipitation. Immunoprecipitation with normal mouse IgG was used as a control (lane 7). (C) Western blot analysis of XIAP and pXIAP(S87) proteins in SNU1 cells co-cultured with *H. pylori* strains 7.13 and B128 for 4 hours. Each experiment was repeated three times; representative blots are shown.



Supplementary Figure 8.

(A) Western blot analysis of pAKT(T308) in AGS (top) and SNU1 (bottom) cells co-cultured with *H. pylori* strains 7.13 or B128 for the indicated time. Uninfected cells were used as a control. Expression of pAKT(T308) was normalized to expression levels of AKT protein. Each experiment was repeated three times; representative blots are shown. (B) Representative IHC staining for Siva1 protein in the corpus and antrum of uninfected mice and ones infected with wild type *H. pylori* strain PMSS1 or its *cagE*- isogenic mutant for 8 weeks. Scale bars: 50 μm. Histograms show IHC scores for expression of Siva1 protein (n=8/group). The insets show magnified views, 40x. The Siva1 IHC staining of gastric tissues is also shown in Figure 1A. Data in (B) were analyzed using one-way ANOVA followed by Tukey's multiple comparison test and presented as mean ± SD, (*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$).