

Supplementary Figures

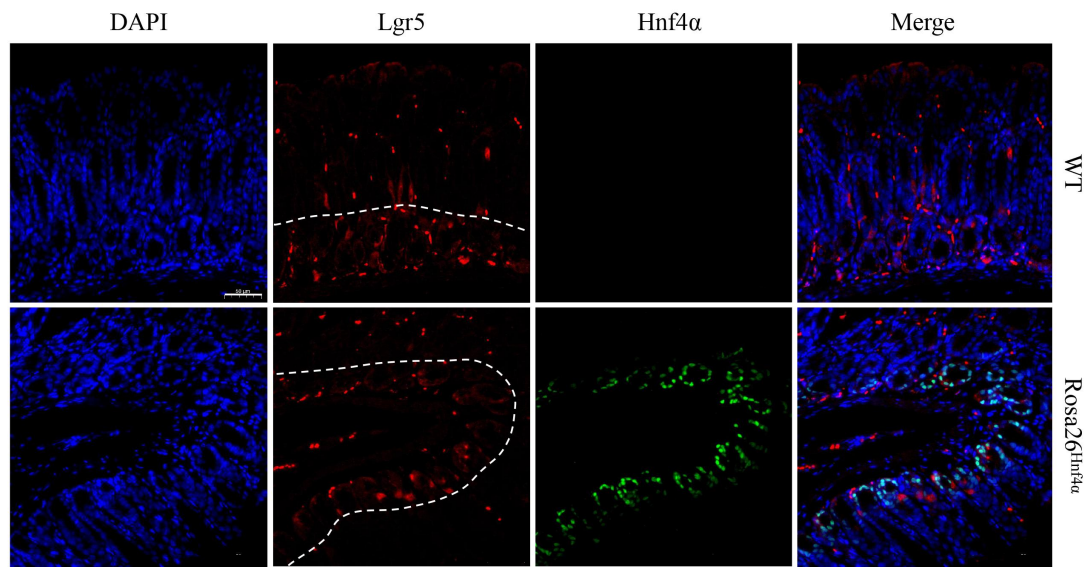


Figure S1. Lgr5Cre-mediated active Hnf4 α expression in murine gastric Lgr5+ stem cells. Immunofluorescence (IF) analysis using DAPI (blue), Lgr5 (red, for Lgr5+ cells) and Hnf4 α (green) antibodies in Lgr5+ stem cells from *WT* and *Rosa26^{Hnf4α}* antrum 1 day after tamoxifen (Tam) administration. The glandular base of the mucosa is distinguished from the rest of the mucosa by a white dashed line. Scale bars: 50 μ m.

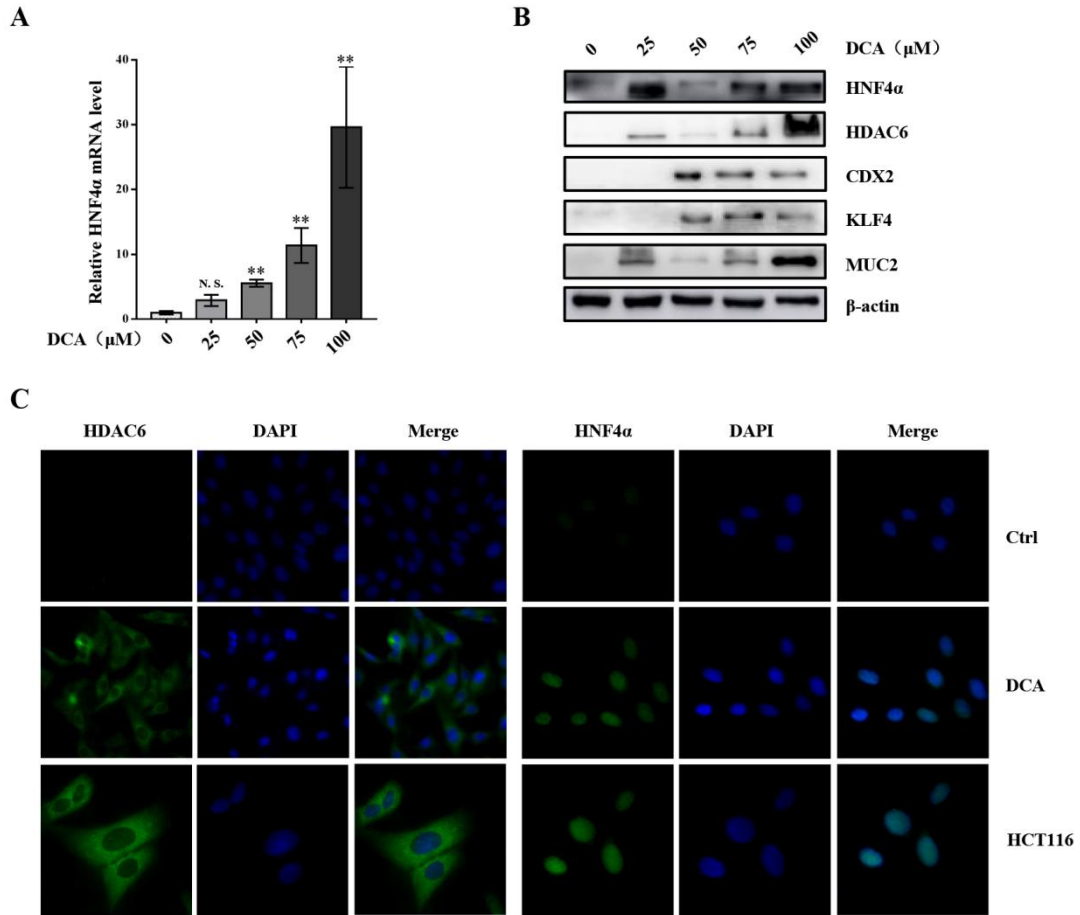


Figure S2. DCA induces HDAC6 and HNF4 α expression. (A) HNF4 α mRNA level was increased by DCA treatment. (B) Effects of gradient concentration of DCA on the expression of HDAC6, HNF4 α and intestinal markers (CDX2, MUC2, KLF4) in AZ521 cells. (C) Effects of DCA on HDAC6 and HNF4 α protein expressions in GES-1 cells was determined by immunofluorescence. After incubation with 100 μ M of the DCA for 24 hours, HDAC6 and HNF4 α positive cells with nuclear staining (DAPI) were observed. HCT116 as a positive control. Representative results of three separate experiments are shown. * $p < 0.05$; ** $p < 0.01$. N.S., not significant.

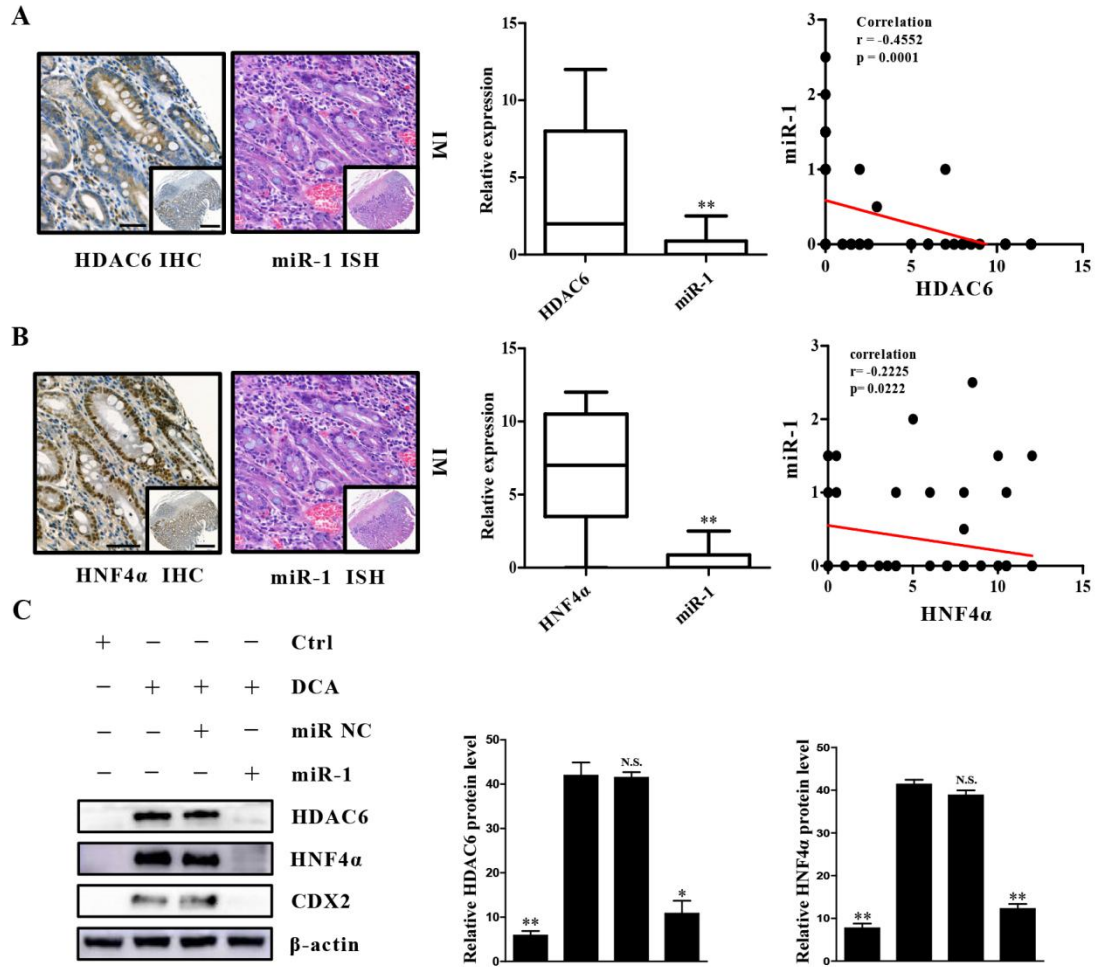


Figure S3. MiR-1 inhibits HDAC6 and HNF4α activity by targeting their 3'UTR. IHC and ISH results showed that expression level of HDAC6 (A) and HNF4α (B) was negatively associated with miR-1 in IM tissues. Scale bars: 100 μm; 500 μm (insets). (C) Upregulation of miR-1 resulted in downregulated protein expression of HDAC6, HNF4α and CDX2 in GES-1 cells after DCA. *p<0.05; **p<0.01. N.S., not significant.