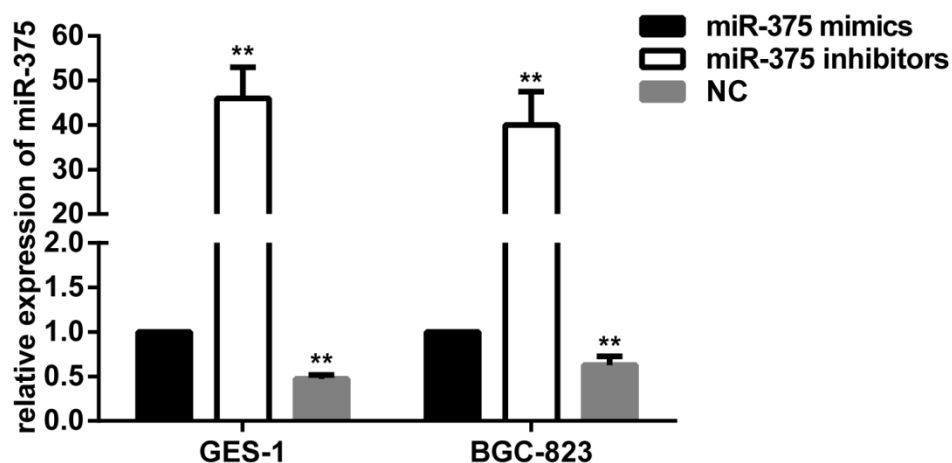
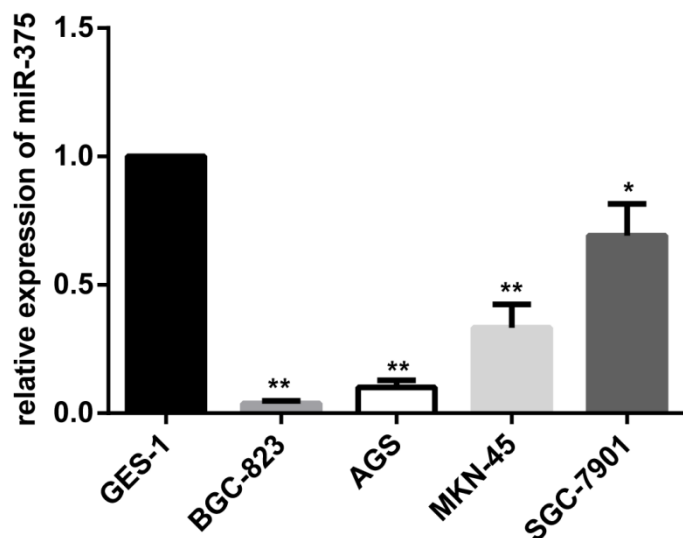


Supplementary Fig. 1



Supplementary Fig. 1 The relative expression of miR-375 was detected by qRT-PCR in GES-1 and BGC-823 cells transfected with miR-375 mimics, inhibitors and negative controls (NC). The average miRNA expression from the NC group was designated as 1. The data are presented as the mean \pm SD of triplicate samples, ** $P < 0.01$ vs. the control group.

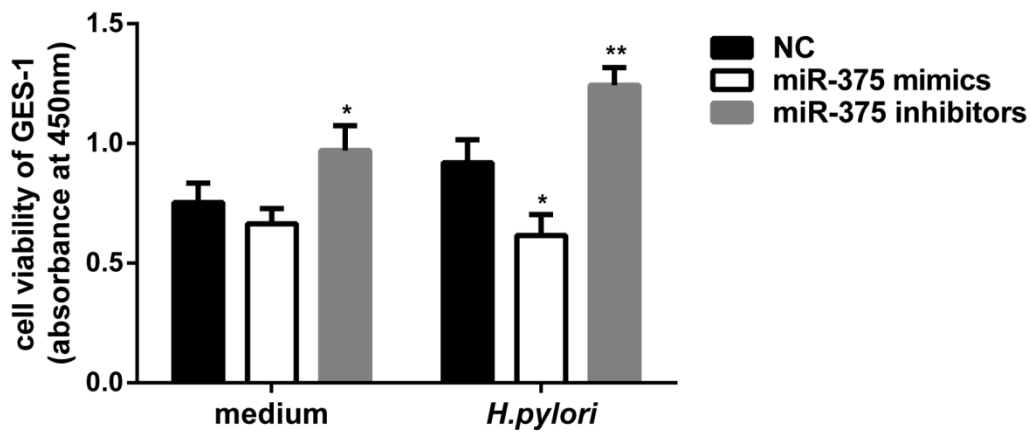
Supplementary Fig. 2



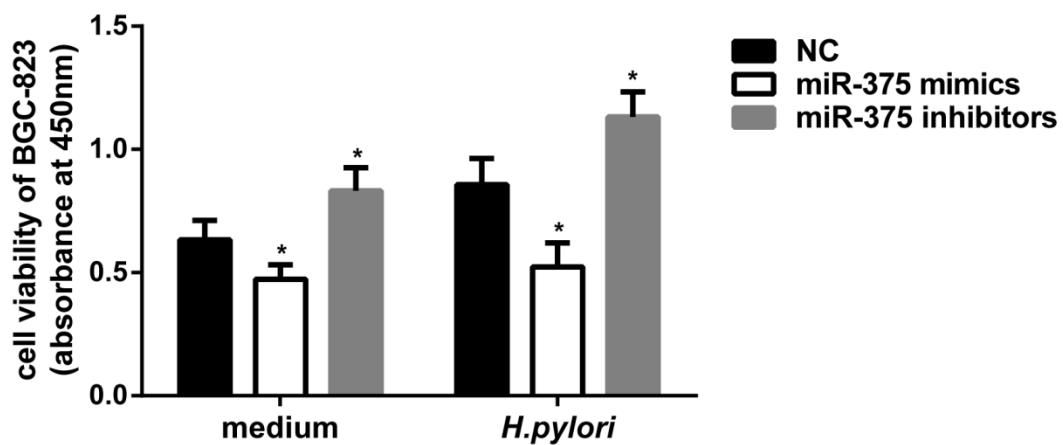
Supplementary Fig. 2 Comparison of miR-375 expression between the nonmalignant gastric epithelial cell line GES-1 and four gastric cancer cell lines, BGC-823, AGS, MKN-45 and SGC-7901 by qRT-PCR. The data were normalized to GES-1 expression. The data are presented as the mean \pm SD of triplicate samples, * $P < 0.05$, ** $P < 0.01$ vs. the control group.

Supplementary Fig. 3

a



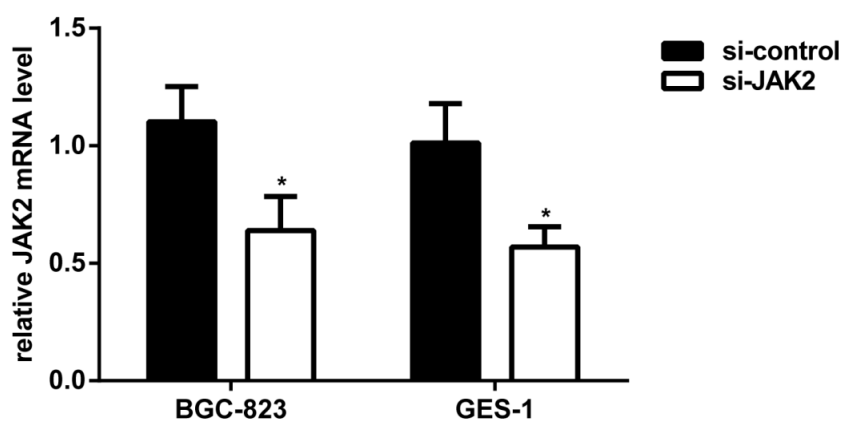
b



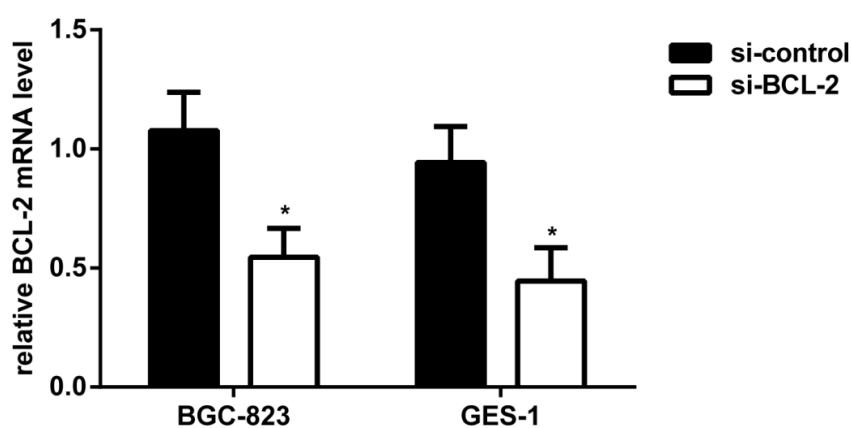
Supplementary Fig. 3 GES-1 (a) and BGC-823 (b) cells transfected with the indicated oligonucleotides at 100 nM were seeded in 96-well plates and subjected to *H. pylori* infection for another 12 h, cell survival of control group and *H. pylori* group were analyzed by CCK-8 assays. The data are presented as the mean \pm SD of triplicate samples, * $P < 0.05$, ** $P < 0.01$ vs. the group transfected with NC of miR-375.

Supplementary Fig. 4

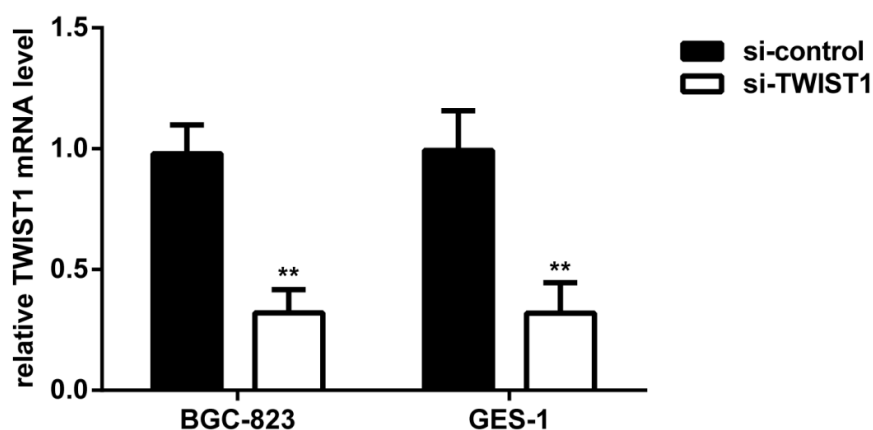
a



b



c



Supplementary Fig. 4 The effects of specific siRNAs on the level of corresponding mRNAs were determined by qRT-PCR. BGC-823 and GES-1 cells transfected with JAK2 siRNAs (a), BCL-2 siRNAs (b), or TWIST1 siRNAs (c) significantly reduced the level of corresponding mRNAs. The results were normalized to the mRNA level transfected with negative control of siRNAs. The data are presented as the mean \pm SD of triplicate samples, * $P < 0.05$, ** $P < 0.01$ vs. the control group.

Supplementary Table 1: General information of human gastric tissues

| Staging | Number | Age(years) | Sex(M/F) | <i>H. pylori</i> infection |
|----------------|--------|------------|----------|----------------------------|
| normal | 8 | 48.1±11.0 | 5/3 | negative |
| gastritis | 8 | 49.5±14.1 | 4/4 | positive |
| gastric cancer | 10 | 59.8±14.5 | 6/4 | positive |

Supplementary Table 2: Primers used for quantitative PCR amplification.

| Gene | Primers |
|---------------|--|
| GAPDH | F: 5'-AAGGTCGGAGTCACCGGATT-3' R: 5'-CTGGAAGATGGTGATGGGATT-3' |
| IL-8 | F: 5'-TACTCCAAACCTTTCCACCCC-3' R: 5'-ACCCTACAACAGACCCACACAAT-3' |
| TNF- α | F: 5'-CCCAGGGACCTCTCTAATCA-3' R: 5'-AGCTGCCCCCTCAGCTTGAG-3' |
| BCL-2 | F: 5'-TGTATGCCCTGCTTTCACTCA-3' R: 5'-TCCAATTCCTTTCGGATCTTT-3' |
| TWIST1 | F: 5'-CGTCCGTCCTCCTGCTCTCTC-3' R: 5'-TGGCTCTTCCTCGCTGTTGCT-3' |

Supplementary Table 3: Wild-type and mutant sequences used in luciferase assays.

| Name | Sequences |
|------------------------|---|
| JAK2 WT (wild type) | F: 5'-CTAGTTGTAAATATTTTTTCACATAAAGGGAACAAATG TCTAGTTTTATTTGTATAGGA-3' R: 5'-AGCTTCCTATACAAATAAAACTAGACATTTGTTCCCTTT ATGTGAAAAATATTTACAA-3' |
| JAK2 MUT (mutant) | F: 5'-CTAGTTGTAAATATTTTTTCACATAAAGGTCGTCGCTGTCT AGTTTTATTTGTATAGGA-3' R: 5'-AGCTTCCTATACAAATAAAACTAGACAGCGACGACCTTT ATGTGAAAAATATTTACAA-3' |