**Supplementary Figure****Legends**

**Fig. S1** H19 shRNA reduced H19 expression in GC cells. **a** Representative images of MKN-45 cells infected with lentiviral vectors carrying H19 shRNA (sh-H19) or negative control (sh-NC). Green: green fluorescent protein (GFP). Scale bar, 100 μm. **b** The levels of H19 in MKN-45 cells infected with sh-H19 or sh-NC. **c** Representative image of SGC-7901 cells infected with sh-H19 or sh-NC. Green: GFP. Scale bar, 100 μm. **d** The levels of H19 in SGC-7901 cells infected with sh-H19 or sh-NC. Each experiment was performed in triplicate. Data are presented as the mean ± SD and analyzed by student’s *t-*test (\*p<0.05, \*\*\*p<0.001)

**Fig. S2** H19 knockdown inhibited LDHA expression. **a** The density of western blot bands shown in Fig. 3b was quantified using ImageJ software. **b** LDHA protein levels were analyzed by western blot in SGC-7901 and MKN-45 cells after transfection with negative control plasmid (NC) or LDHA overexpression plasmid (LDHA). β-actin served as a loading control. The density of western blot bands was quantified using ImageJ software. **c** The density of western blot bands shown in Fig. 3c was quantified using ImageJ software. Each experiment was performed in triplicate. Data are presented as the mean ± SD and analyzed by student’s *t-*test (\*p<0.05, \*\*p<0.01, \*\*\*p<0.001)

**Fig. S3** Subcellular localization of H19 in lncATLAS (<http://lncatlas.crg.eu/>) website.

**Fig. S4** H19 modulated LDHA expression via miR-519d-3p. **a** The density of western blot bands shown in Fig. 5dwas quantified using ImageJ software. **b** The levels of miR-519d-3p in both sh-H19 SGC-7901 and MKN-45 cells after transfection with inhibitor NC or miR-519d-3p inhibitor were analyzed by RT-qPCR. **c** The density of western blot bands shown in Fig. 5f was quantified using ImageJ software. Each experiment was performed in triplicate. Data are presented as the mean ± SD and analyzed by student’s *t-*test (\*p<0.05, \*\*p<0.01, \*\*\*p<0.001)