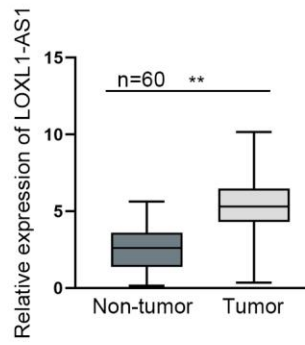
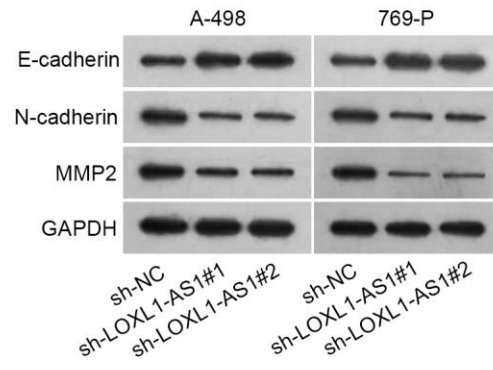
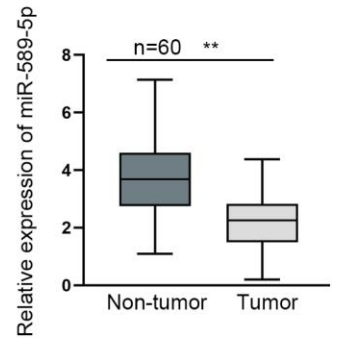
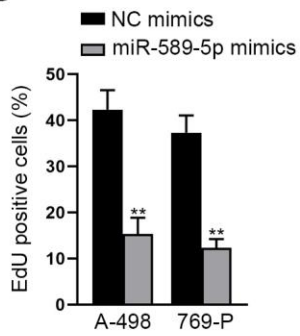
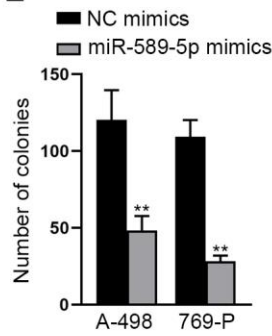
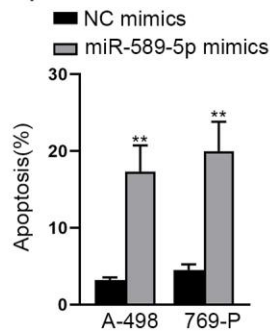
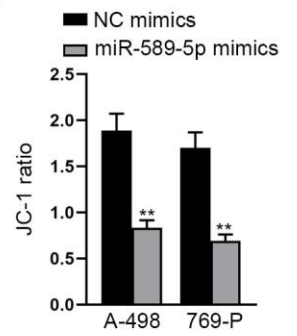
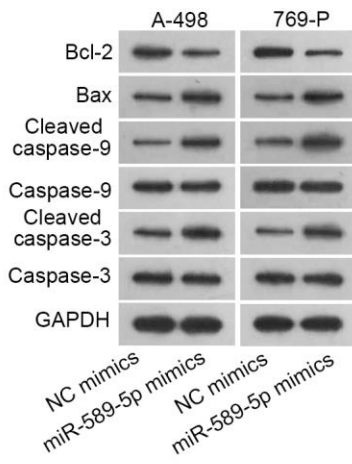
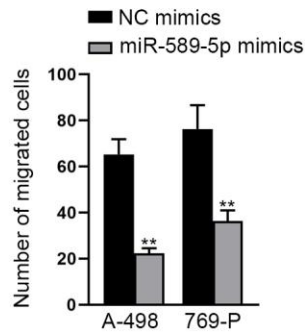
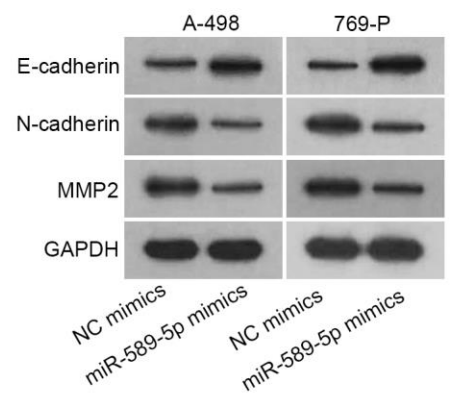
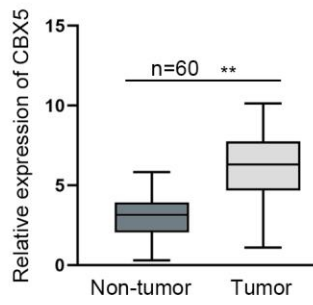
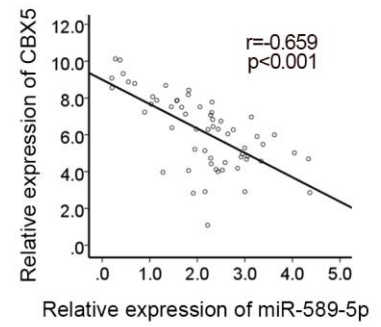
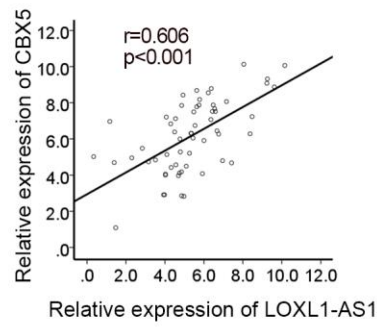
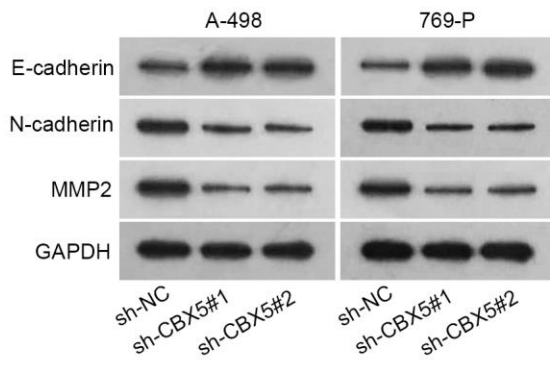
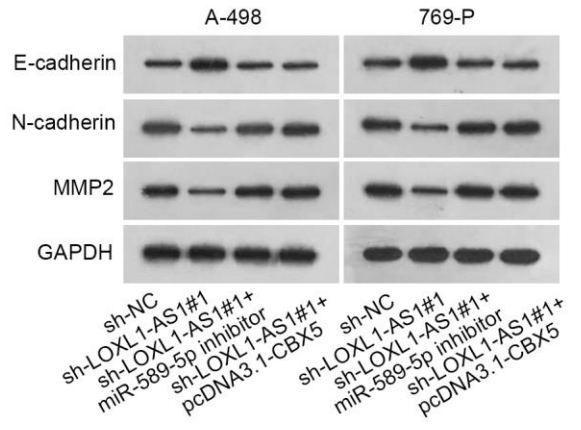


**A****B****C****D****E****F****G****H****I****J**

**Supplementary figure 1** (A) Relative expression of LOXL1-AS1 in 60 pairs of RCC samples was analyzed by qRT-PCR. (B) The levels of migration-related proteins, including E-cadherin, N-cadherin and MMP2, were analyzed by western blot. (C) The level of miR-589-5p in 60 RCC tissues and paired non-tumor tissues was determined by qRT-PCR. (D-J) The impact of miR-589-5p overexpression on the proliferation, apoptosis and migration of A-498 and 789-P cells was assessed by EdU, colony formation and transwell assays, as well as related proteins determined by western blot analysis. \*\*P < 0.01.

**A****B****C****D**

**Supplementary figure 2** (A) The expression of CBX5 in 60 RCC tissues and corresponding non-tumor tissues was estimated by qRT-PCR. (B) Pearson's correlation analysis validated the association of CBX5 expression with LOXL1-AS1 or miR-589-5p level in 60 RCC tissues. (C-D) The levels of E-cadherin, N-cadherin and MMP2 in A-498 and 789-P cells under different conditions were assessed by western blot. \*\*P < 0.01.