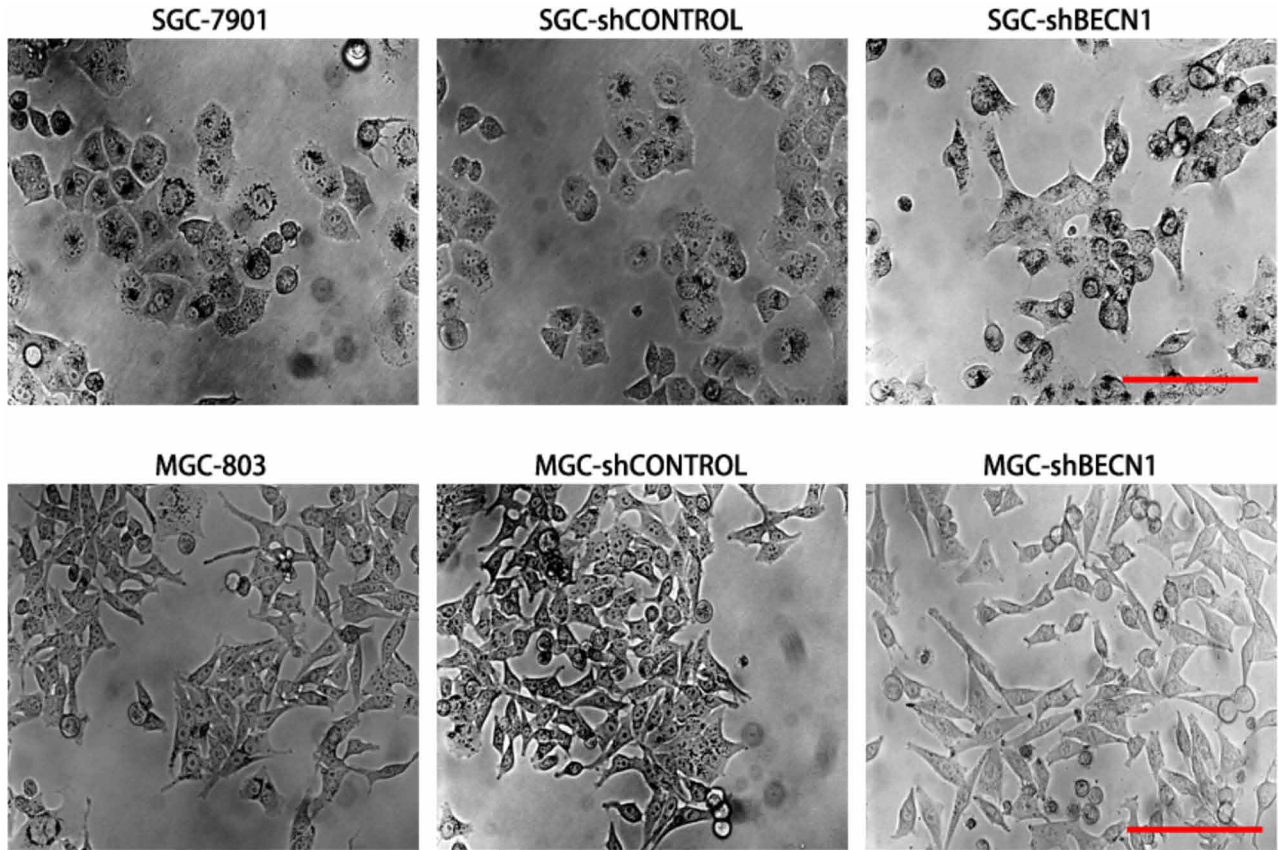
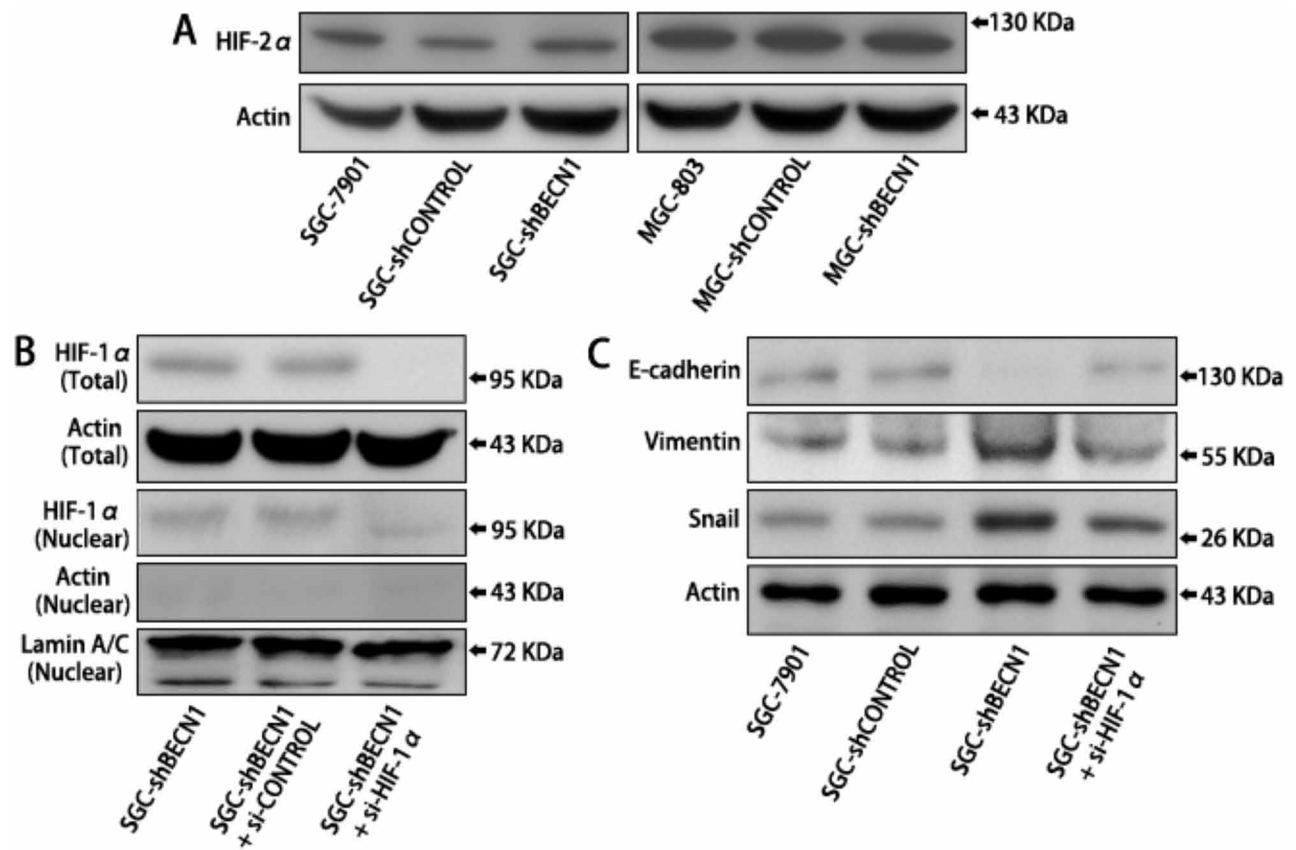


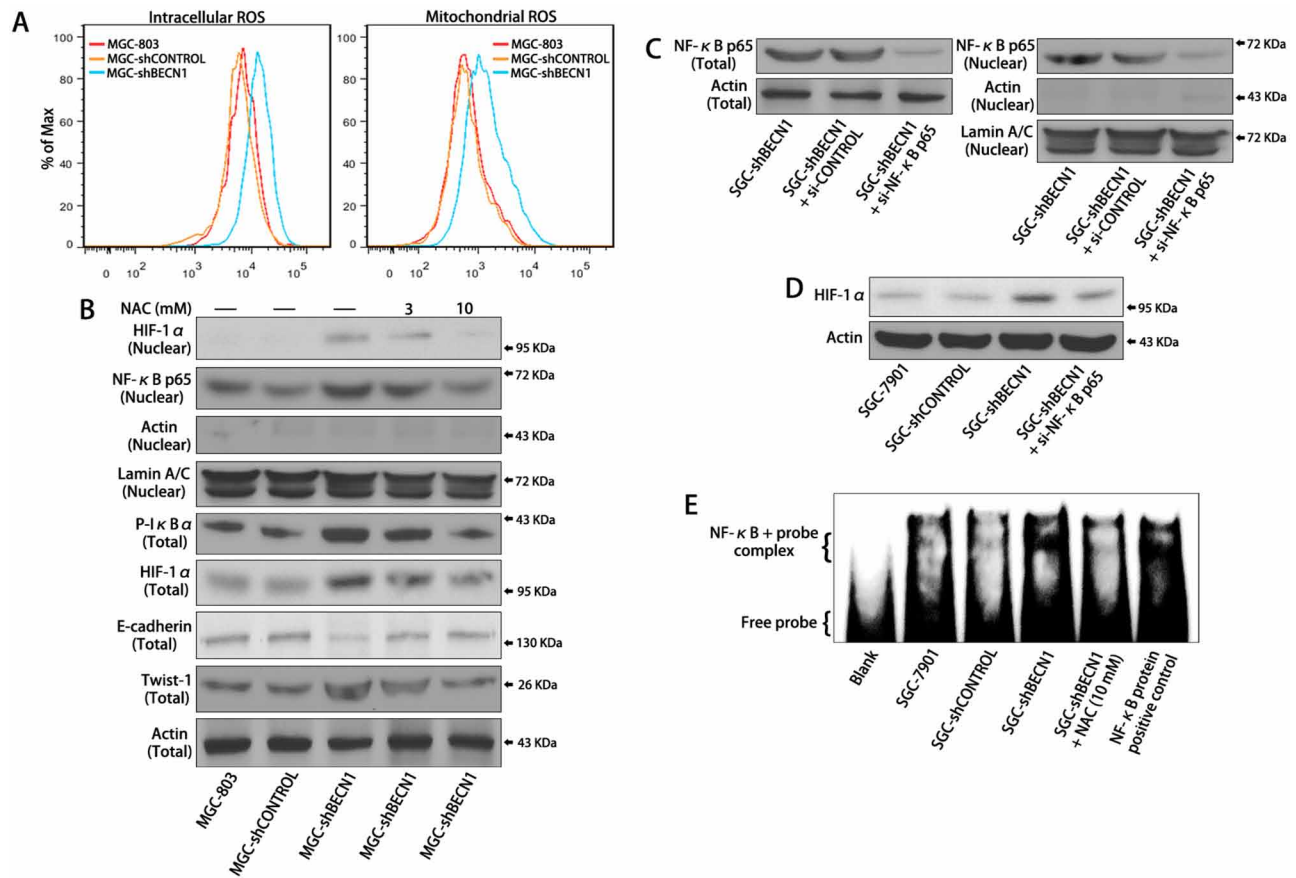
**SUPPLEMENTARY FIGURES**



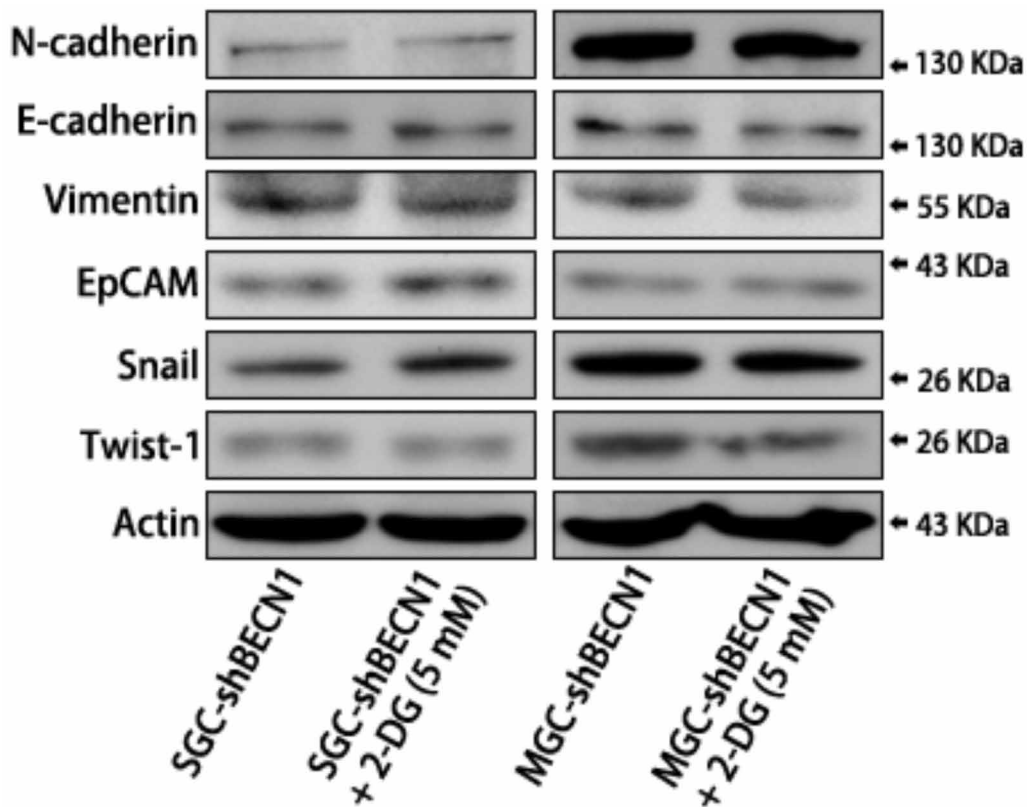
**Supplementary Figure S1: Autophagy defect induces mesenchymal-like morphologies in gastric cancer cells.** SGC-shBECN1 and MGC-shBECN1 cells were more spindle-like and scattered than control cells. Scale bar, 100  $\mu$ m.



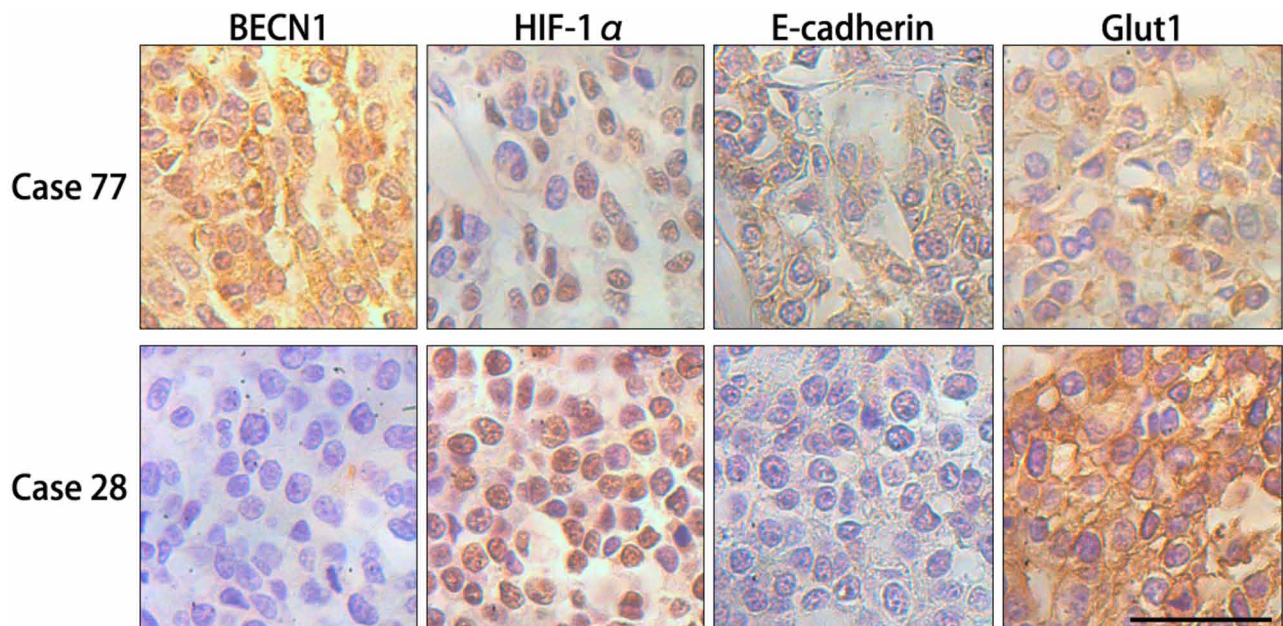
**Supplementary Figure S2: Activation of HIF-1α is necessary for autophagy defect induced EMT.** A. HIF-2α expression in autophagy-deficient cells and control cells were determined by Western blot. B & C. After transfection with HIF-1α siRNA, the expression of EMT markers in SGC-shBECN1 cells were analyzed by Western blot.



**Supplementary Figure S3: Autophagy defect increases HIF-1 $\alpha$  expression via ROS-NF- $\kappa$ B-HIF-1 $\alpha$  pathway.** **A.** Intracellular and mitochondrial ROS levels were determined by FCM. **B.** After treating MGC-shBECN1 cells with 3 or 10 mM NAC for 48 h, the expression of HIF-1 $\alpha$  and NF- $\kappa$ B p65 in nuclei, and the expression of Phospho-I $\kappa$ B $\alpha$ , HIF-1 $\alpha$ , E-cadherin, Twist-1 in whole cells were determined by Western blot. **C & D.** After transfection with NF- $\kappa$ B p65 siRNA, the HIF-1 $\alpha$  expression in SGC-shBECN1 cells were analyzed by Western blot. **E.** After incubation with or without 10 mM NAC for 48 h, the EMSA was performed to observe the binding activity between nuclear extracts and specific probe (containing NF- $\kappa$ B binding site in HIF-1 $\alpha$  promoter).



**Supplementary Figure S4: Autophagy inhibition induced glycolysis has no effect on EMT.** After incubation with 5 mM 2-DG for 12 h, the EMT markers in SGC-shBECN1 and MGC-shBECN1 cells were determined by Western blot.



**Supplementary Figure S5: Immunohistochemical analysis of consecutive sections from human gastric cancer tissues.** The expression of HIF-1 $\alpha$ , E-cadherin and Glut1 were determined in positive BECN1 expression case (case 77) and negative case (case 28) respectively. HIF-1 $\alpha$  was mainly localized in nucleus, while Glut1 was largely distributed in cytoplasm and cytomembrane. Scale bar, 100  $\mu$ m.