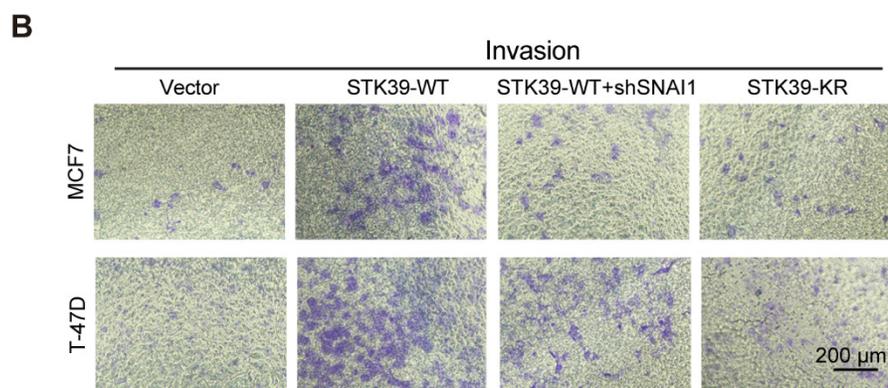
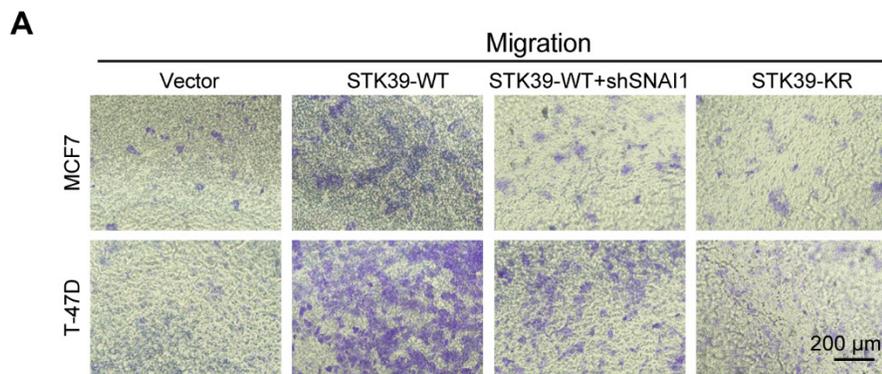
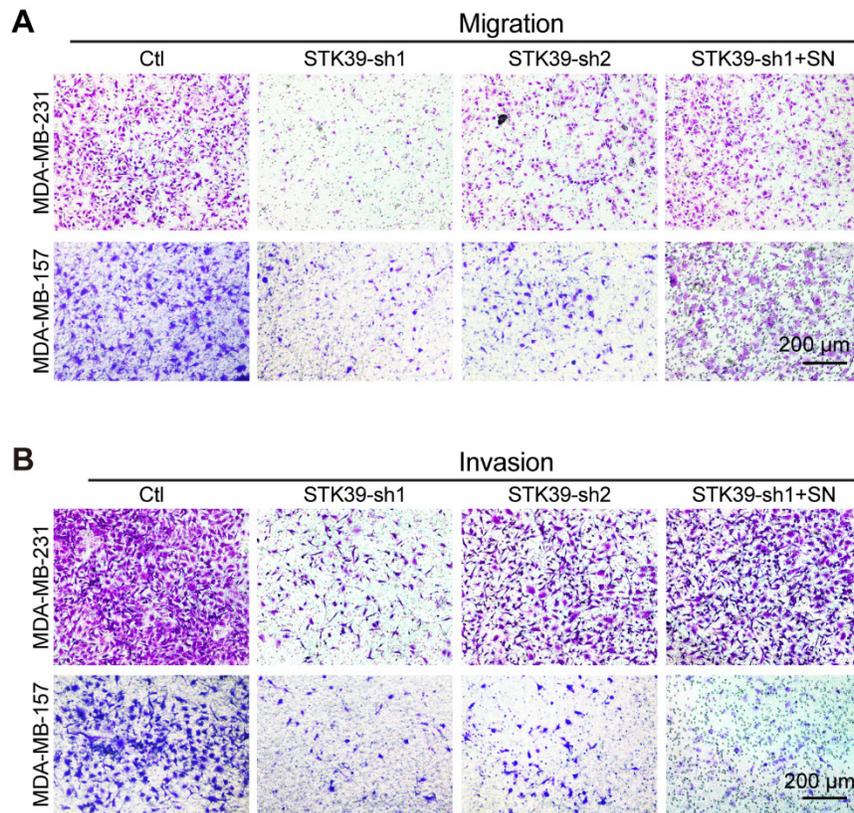


**Supplemental Figure 1:** (A) Flag-Snail was expressed with or without Myc-SPAK. Cells were treated with or without 10  $\mu$ m SB203580 (SB) for 24 h. Lysates were analyzed by western blot. (B) HA-Snail and Myc-GSK3 $\beta$  was co-transfected with or without Myc-SPAK into 293T cells, then treated with MG132 for 6 h. Cell lysates were immunoprecipitated using anti-Myc antibody and analyzed by immunoblotting.





**Supplemental Figure 3:** (A) STK39 was expressed in MCF7 and T-47D cells. A rescue experiment with knockdown of SNAI1 expression in WT-STK39 expressing cells was also performed. Representative images for cell migration. (B) Representative images for cell invasion.



**Supplemental Figure 4:** (A) STK39 was knocked down by two different shRNAs in MDA-MB-231 and MDA-MB-157 cells. Rescued SNAI1 expression in the STK39-knockdown clone was also performed. Representative images for cell migration. (B) Representative images for cell invasion.