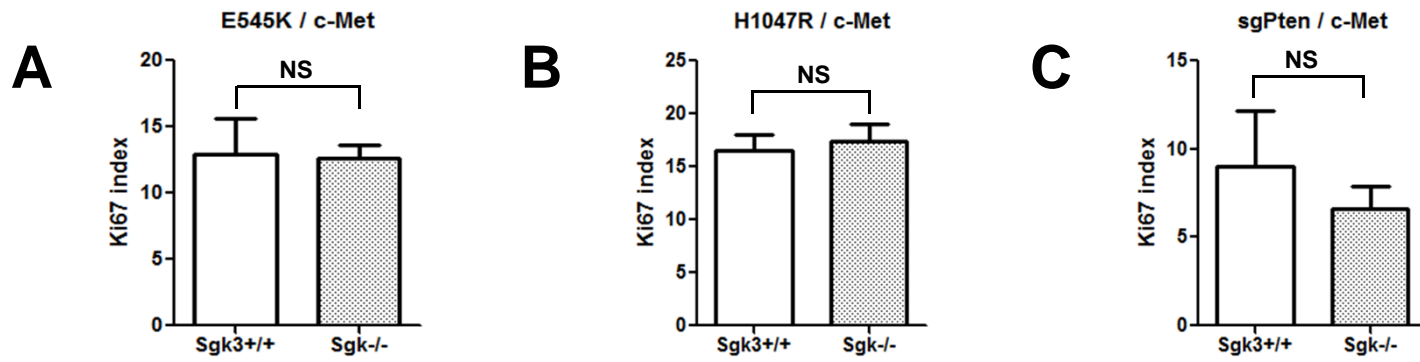
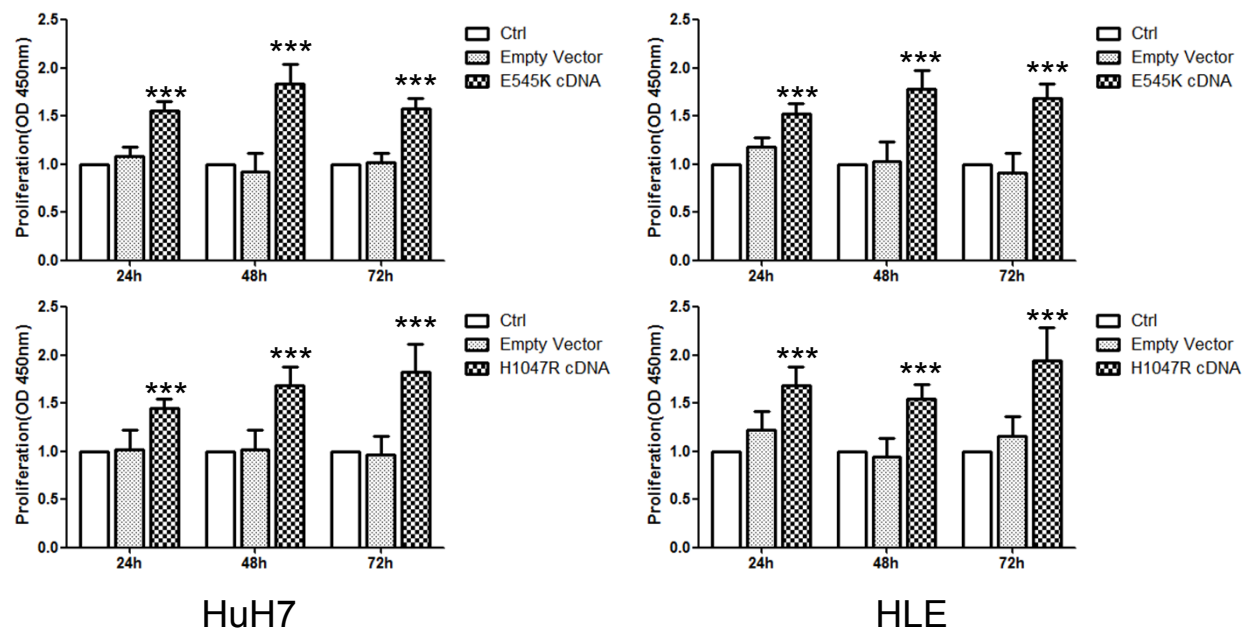


Supplementary Figure 1: SGK3 does not regulate lipogenesis in human HCC cell lines. (A) Suppression of *SGK3* expression by specific siRNA for 48h does not affect levels of FASN, ACC, and SCD1 lipogenic proteins and the master lipogenesis inducer activated/phosphorylated (p) AKT in HuH7 cells, as assessed by Western blot analysis. β -Actin was used as a loading control. **(B)** Equivalent results were obtained in HLE cells. **(C, D)** Knockdown of *SGK3* by siRNA for 24 h and 48h does not affect triglycerides and cholesterol levels in the two cell lines. Tukey-Kramer's test: * $P < 0.05$; ** $P < 0.01$.

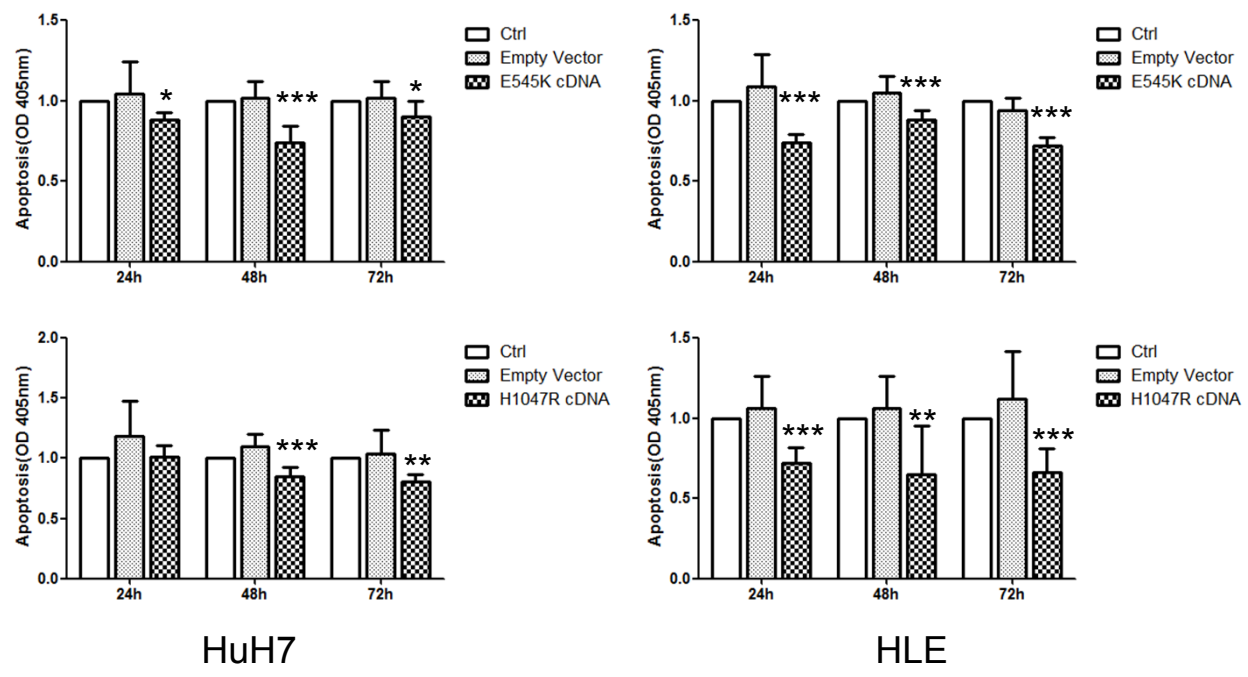


Supplementary Figure 2: Quantification of Ki67 in *Sgk3*^{+/+} and *Sgk3*^{-/-} mice injected with E545K, H1047R, or sgPten and c-Met constructs. (A) E545K/c-Met ($P = 0.9198$); (B) H1047R/c-Me ($P = 0.6839$); (C) sgPten/c-Met ($P = 0.4951$).

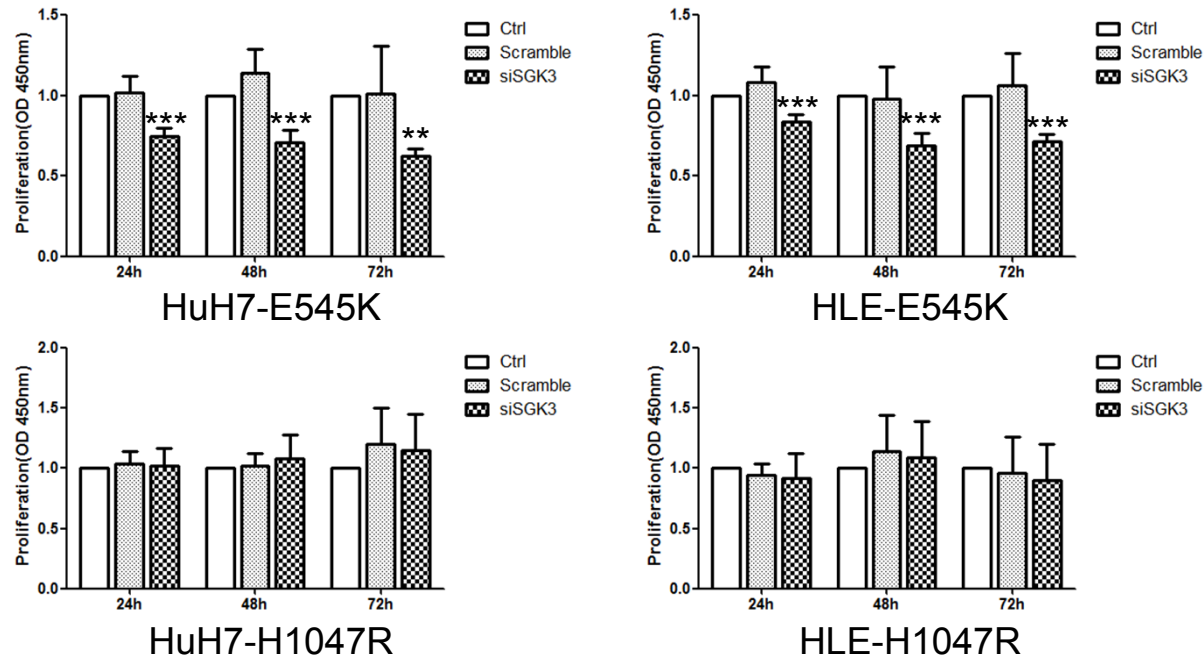
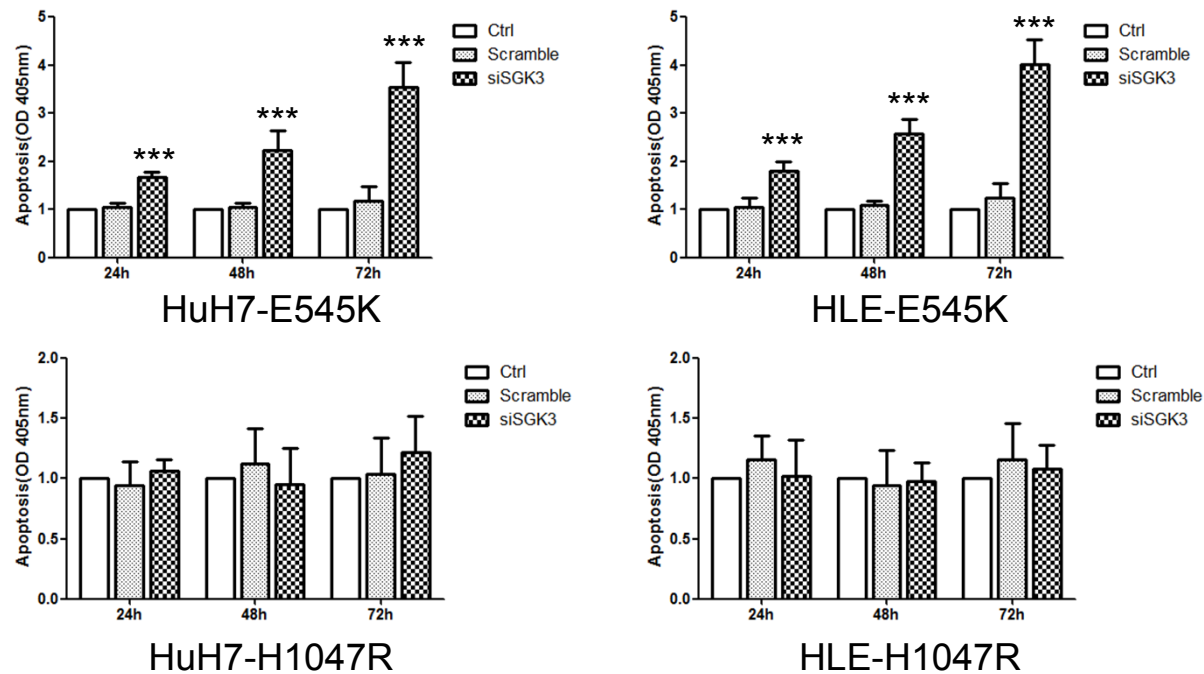
A



B

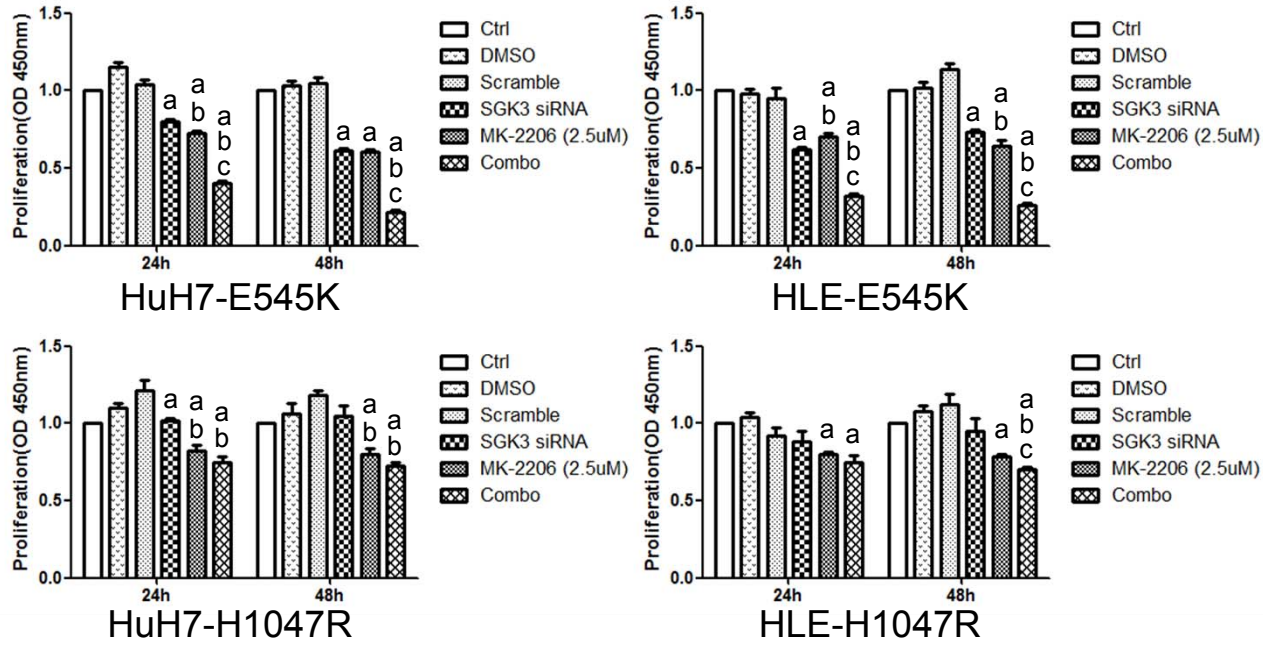


Supplementary Figure 3. Effect of the PIK3CA mutants on cell proliferation and apoptosis of HCC cell lines. (A) Cell proliferation in the HuH7 and HLE cell lines. (B) Apoptosis. Tukey-Kramer's test: * $P < 0.05$; ** $P < 0.01$; * $P < 0.001$.**

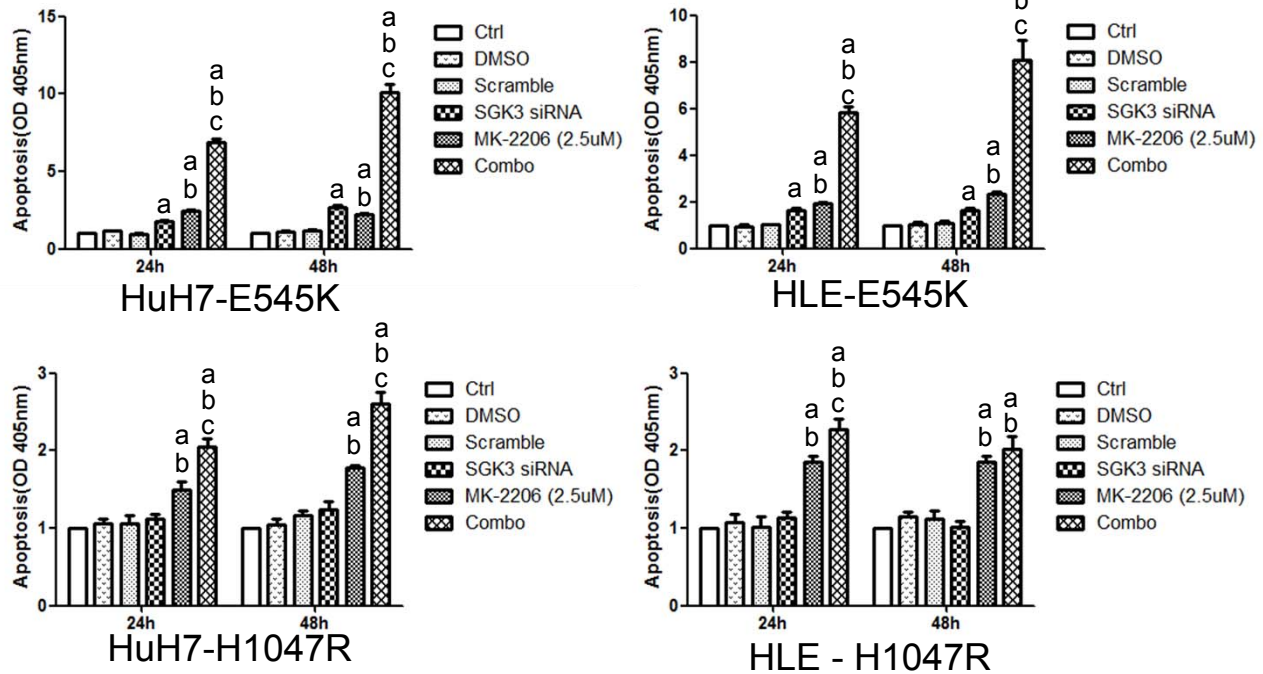
A**B**

Supplementary Figure 4.
Effect of silencing of SGK3 by siRNA on cell proliferation and apoptosis of HCC cell lines stably transfected with E545K or H1047R mutant. (A) Cell proliferation in the HuH7 and HLE cell lines stably transfected with E545K or H1047R mutant. (B) Apoptosis. Tukey-Kramer's test: * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

A



B



Supplementary Figure 5. Effect of AKT inhibitor MK-2206 on cell proliferation and apoptosis of HCC cell lines stably transfected with E545K or H1047R mutant. (A) Cell proliferation in the HuH7 and HLE cell lines stably transfected with E545K or H1047R mutant. (B) Apoptosis. Tukey Kramer test, $P < 0.05$, a: vs Scrmble treated cells; b: vs SGK3 siRNA; c: vs MK-2206 (2.5 μ m).