Supplementary Fig. 1. YARS is correlated with poor prognosis in HCC patients. (A) UALCAN data for the YARS level in 371 HCC tissues and 50 normal samples. (B-D) The UALCAN, Kaplan Meier Plotter, and starBase databases with prognostic information for the association between the YARS level and the survival of HCC patients. (E) StarBase data for the expression correlation between miR-22-3p and NCK1-AS1, and YARS and NCK1-AS1 in HCC samples.
**Supplementary Fig. 2.** NCK1-AS1 regulates the PI3K/AKT pathway by the miR-22-3p/YARS axis. (A) The silencing efficiency of sh-YARS. (B) The levels of PI3K/AKT pathway members (PI3K, AKT, ERK, mTOR) in sh-YARS transfected cells measured by western blotting. (B) The levels of PI3K/AKT pathway members (PI3K, AKT, ERK, mTOR) in Hep-3B and Huh7 cells transfected with sh-NC, sh-NCK1-AS1#1, sh-NCK1-AS1#1 plus miR-22-3p inhibitor, and sh-NCK1-AS1#1 plus pcDNA3.1/YARS measured by western blotting. **p < 0.01.