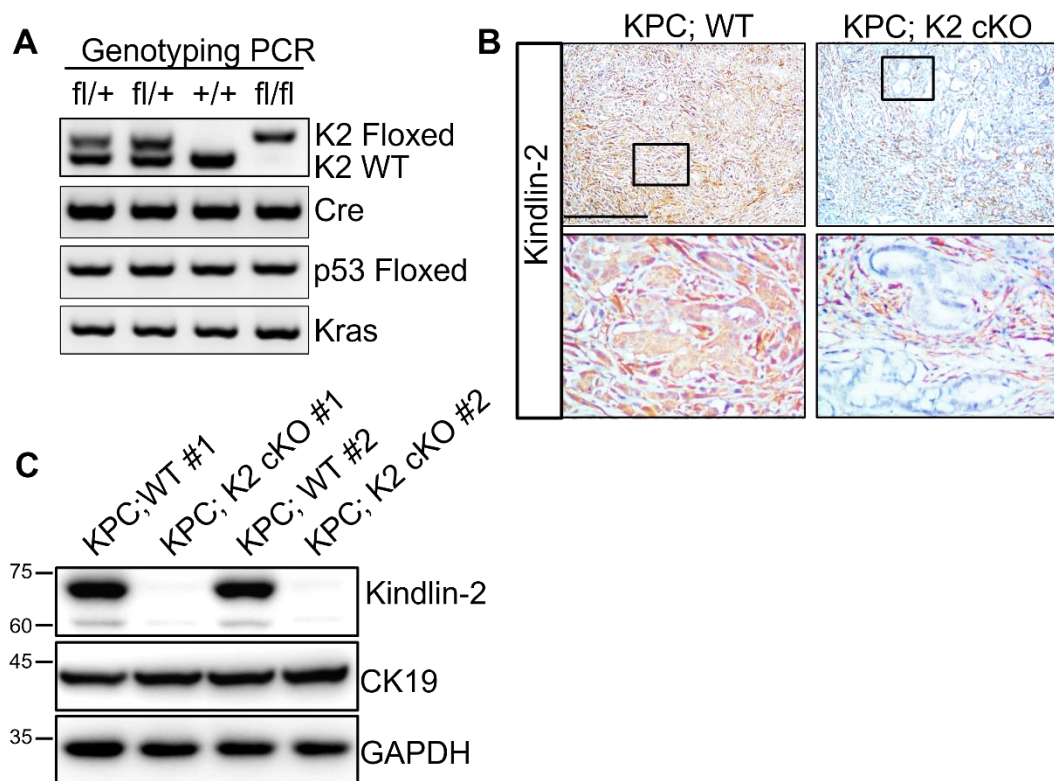
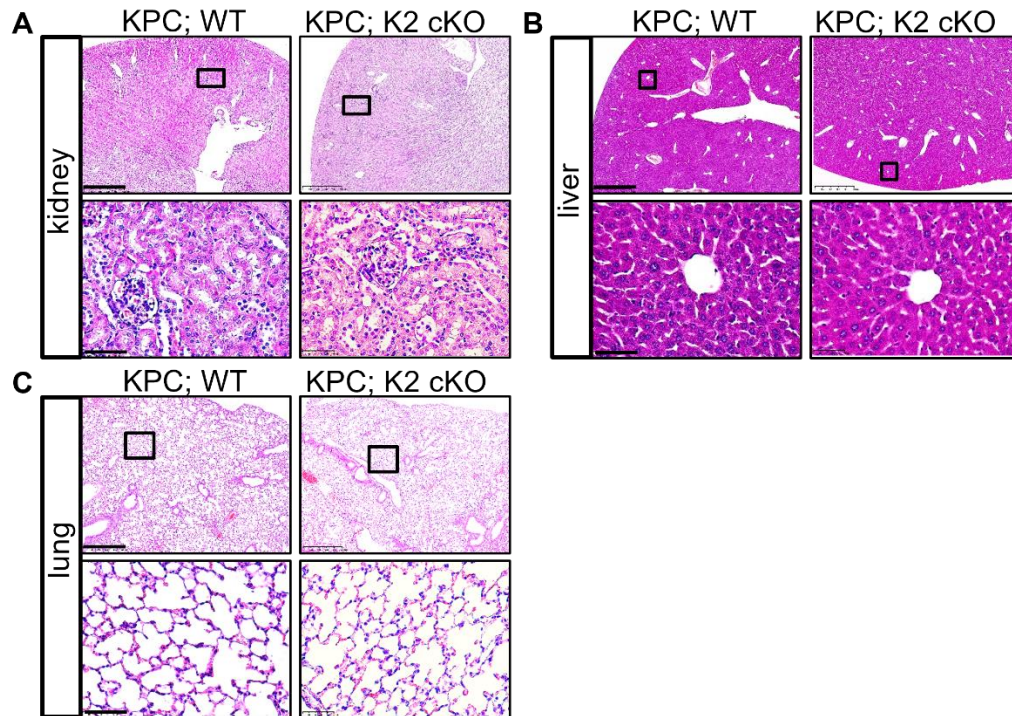


## Supplementary Material:

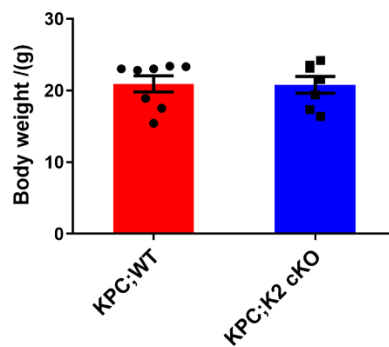


**Supplementary Figure 1. Generation of KPC; Kindlin-2 cKO mice (KPC; K2 cKO).** (A) Representative PCR analysis of extracted genomic DNA from tail clippings. PCR product bands of Kindlin-2 (K2) floxed (640 bp) and K2 WT (572 bp) were shown. p53 floxed,  $Kras^{LSL-G12D}$  (Kras) and Cre PCR products were also indicated. (B) Representative images of pancreatic tumor tissues from KPC;WT and KPC;K2 cKO littermates at 9-week-age stained with anti-Kindlin-2 antibody. Scale bar: 100  $\mu$ m. The lower panels of (B) showed higher magnification images of the areas outlined with black squares in the upper panels. (C) Immunoblotting analysis of Kindlin-2 expression in primary pancreatic cancer cells (PCCs) isolated from two paired KPC;WT and KPC;K2 cKO littermates. Cytokeratin 19 (CK19) was used as

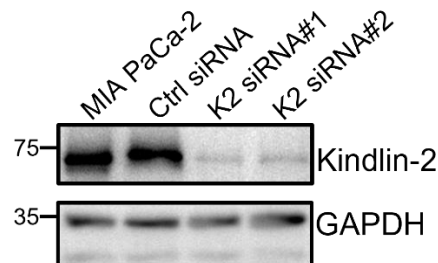
a marker of pancreatic ductal adenocarcinomas.



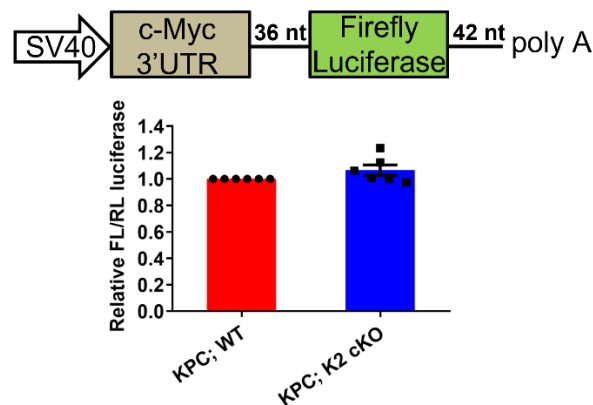
**Supplementary Figure 2. KPC;K2 cKO mice display normal development of a set of key organs, such as kidney, liver, and lungs. (A-C) Representative histologic images of H&E staining in kidney (A), liver (B) and lung sections (C) from KPC;WT and KPC;K2 cKO. Scale bar: 1 mm (upper panel); 50 μm (lower panel).**



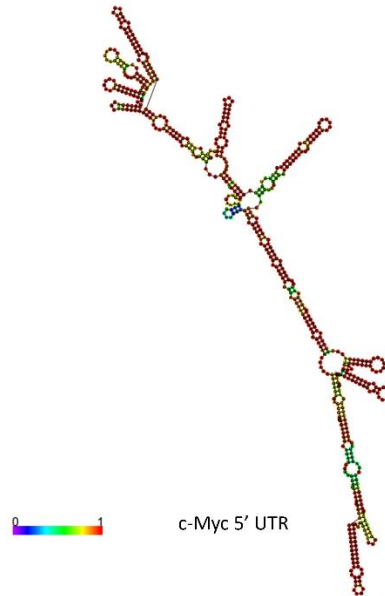
**Supplementary Figure 3. Comparison of body weights between KPC;WT and KPC;K2 cKO mice at 7-week-age.**



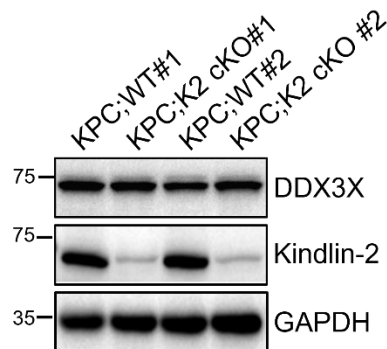
**Supplementary Figure 4. Knockdown of Kindlin-2 in human pancreatic cancer cells MIA PaCa2.** Immunoblotting analysis of Kindlin-2 protein expression in control (Ctrl siRNA) and Kindlin-2 knockdown (K2 siRNA#1 and K2 siRNA#2) MIA PaCa-2 cells.



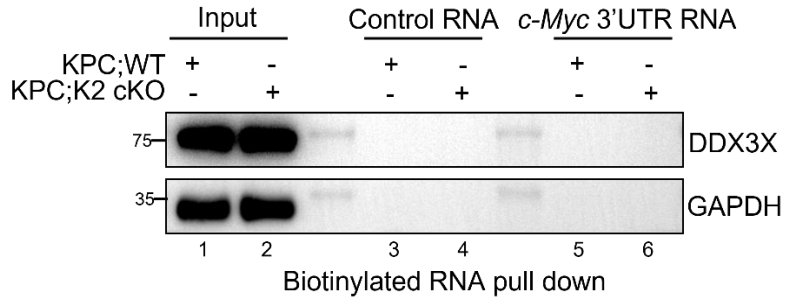
**Supplementary Figure 5. Loss of Kindlin-2 does not alter c-Myc 3'UTR-mediated translation.** Upper panel: schematic of c-Myc 3'UTR-mediated translation (*Firefly* luciferase as a reporter gene). Lower panel: luciferase assay of c-Myc 3'UTR-mediated translational activity in primary PCCs.  $n = 6$  independent experiments. FL, *firefly*; RL, *Renilla*.



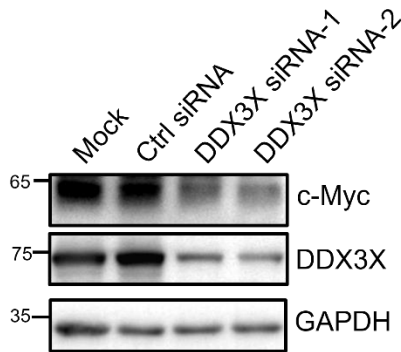
**Supplementary Figure 6. Schematic representation of the 5'-UTR of c-Myc mRNAs.**



**Supplementary Figure 7. Depletion of Kindlin-2 did not alter DDX3X protein expression.** Immunoblotting analysis of DDX3X protein levels in PCCs isolated from two paired KPC;WT and KPC;K2 cKO littermates.



**Supplementary Figure 8. DDX3X does not associate with c-Myc 3'UTR.** Pull-down assay using the biotinylated c-Myc 3'-UTR RNA with cell lysates of mouse primary PCCs, followed by immunoblotting analysis with antibodies as indicated.



**Supplementary Figure 9. Depletion of DDX3X reduced c-Myc expression.** Knockdown of DDX3X in mouse primary pancreatic cancer cells (PCCs) using two independent siRNA, siRNA-1 and siRNA-2. The protein levels of c-Myc and DDX3X were evaluated by immunoblotting with antibodies as indicated. GAPDH was used as the loading control.