Supplemental Figure 1. *Siva* heterozygous mice display reduced tumor number and tumor burden. A) Boxplot depicting the median number and quartiles of tumors (adenomas and adenocarcinomas) per total lung area. Dots represent outlier data points. $Kras^{LSL\text{-}G12D};Siva^{+/-}$ *p=0.011; $Kras^{LSL\text{-}G12D};Siva^{fl/+}$ *p=0.046 by Wilcox Rank Sum Test compared to $Kras^{LSL\text{-}G12D};Siva^{+/+}$. B) Boxplot depicting median tumor burden and quartiles calculated as tumor area per total lung area for tumors (adenomas and adenocarcinomas). Dots represent outlier data points. $Kras^{LSL\text{-}G12D};Siva^{+/-}$ *p=0.03 by Wilcox Rank Sum Test compared to $Kras^{LSL\text{-}G12D};Siva^{+/+}$.

Supplemental Figure 2. *Siva* loss does not affect proliferation in non-lung cancer cell lines. **A)** Average percent BrdU incorporation in primary Mouse Embryonic Fibroblasts (MEFs) derived from wild-type or $Siva^{fl/-}$ E13.5 embryos. The *Siva* locus was excised by infection with Adeno-Cre (AdCre). Adeno-Empty (AdEmp) virus was used as a negative control for recombination. Error bars represent +/-SD of experiment performed in triplicate. **B)** Average percent BrdU incorporation in pancreatic cancer cell lines harboring $Kras^{G12D}$ mutation and either *p53* wild-type (32, 33) or *p53* null (NB628, NB490) upon knockdown of *Siva* (shSiva) or control knockdown (shGFP). Error bars represent +/-SD of experiment performed in triplicate. Bottom: Western blot analysis for SIVA in pancreatic cell lines expressing control (shGFP) or shSiva. ACTIN was used as a loading control.

Supplemental Figure 3. *Siva* knockdown does not induce apoptosis. A) FACS analysis of Annexin-V/Propidium Iodine (PI) stained LSZ4 cells with control (shGFP) or *Siva* (shSiva) knockdown. Right: Quantification of Annexin-V-positive cells. Average +/- SD of four cell lines. **B)** Western blot analysis of PARP and cleaved PARP in LSZ4 cells with control (shLacZ)

or *Siva* (shSiva) knockdown. Right: Positive (embryonic stem cells grown without glucose for 2 days) and negative (embryonic stem cells grown in glucose) controls for cleaved PARP. Shorter exposure was used for positive and negative controls relative to LSZ4 cells to allow optimal visualization. ACTIN was used as a loading control.

Supplemental Figure 4. *Siva* loss does not affect NFκB signaling. A) Western blot analysis of phospho-p65 (p-p65) and p65 in LSZ-4 cells upon shSiva or shGFP control transduction. ACTIN serves as a loading control. **B)** Average percent BrdU incorporation in *Siva*-knockdown cells either untreated (DMSO) or treated with 10μM TAK1 inhibitor (5*Z*)-7-Oxozeaenol) for 1 hour prior to BrdU pulse. Error bars represent +/-SD. p-value by Student's t-test: *p-value<0.05, **p-value<0.01. n=3.