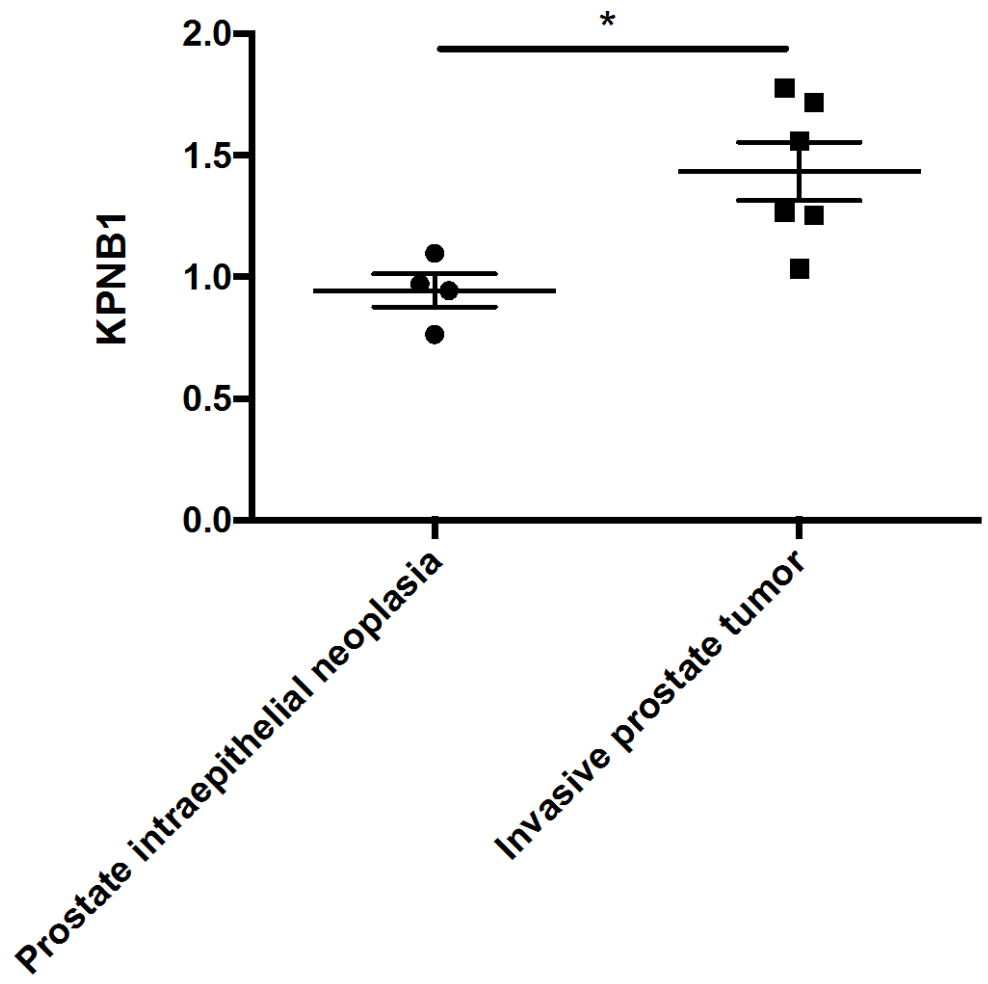
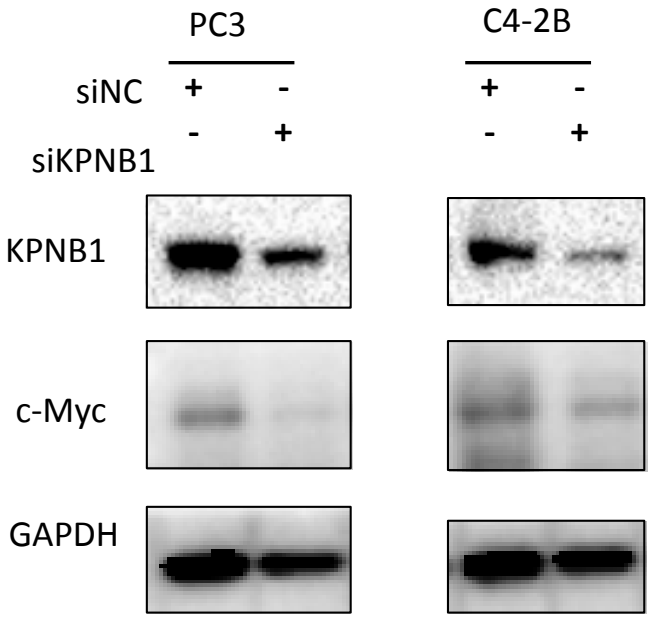
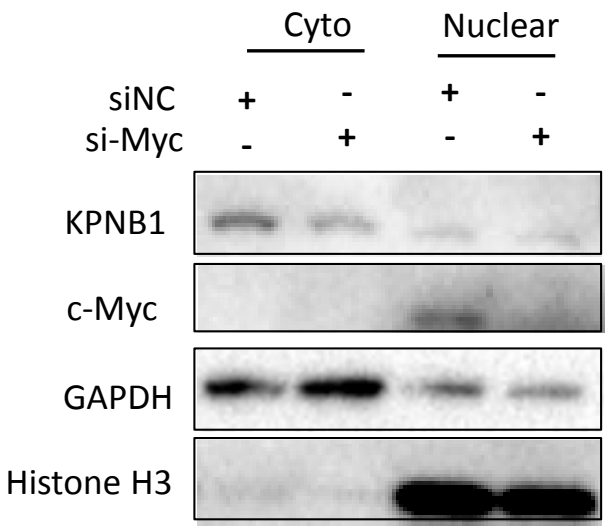
Supplementary figure 1



Supplementary figure 2

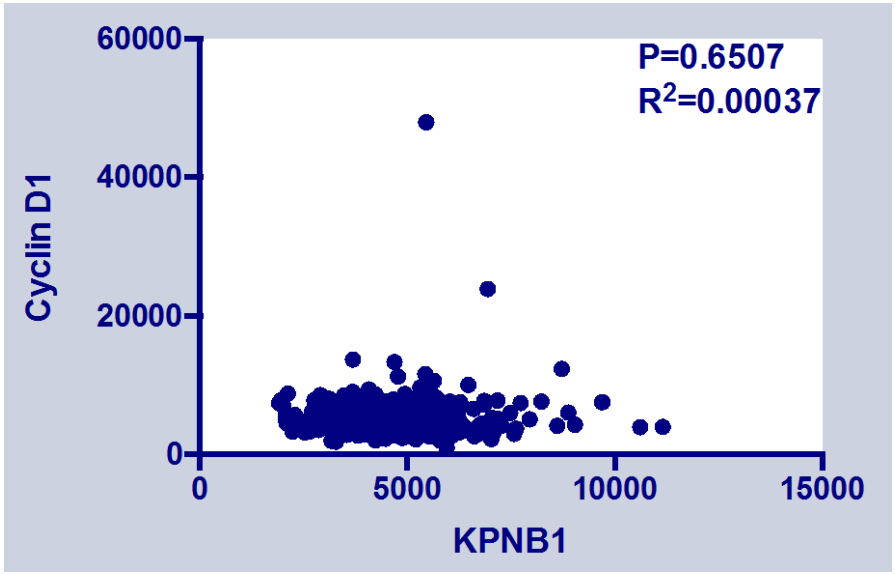


Supplementary figure 3

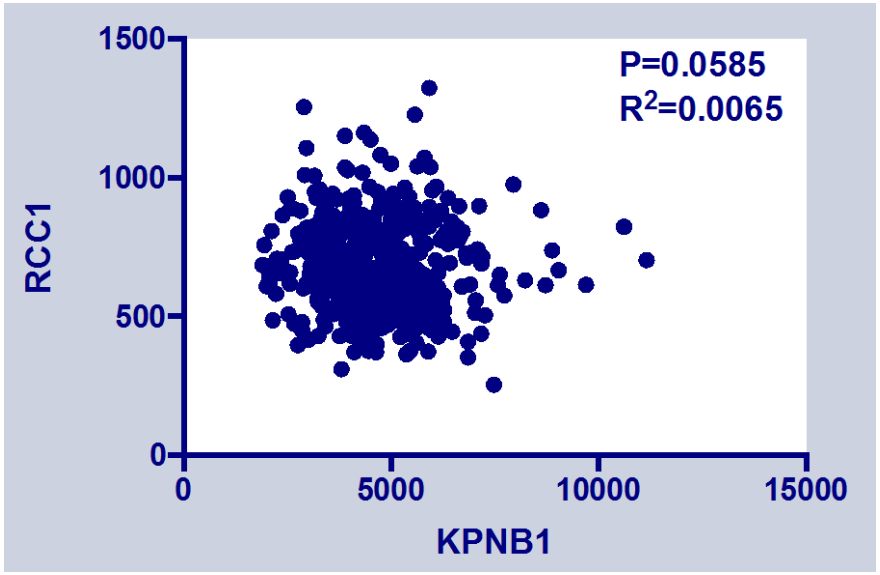


Supplementary figure 4

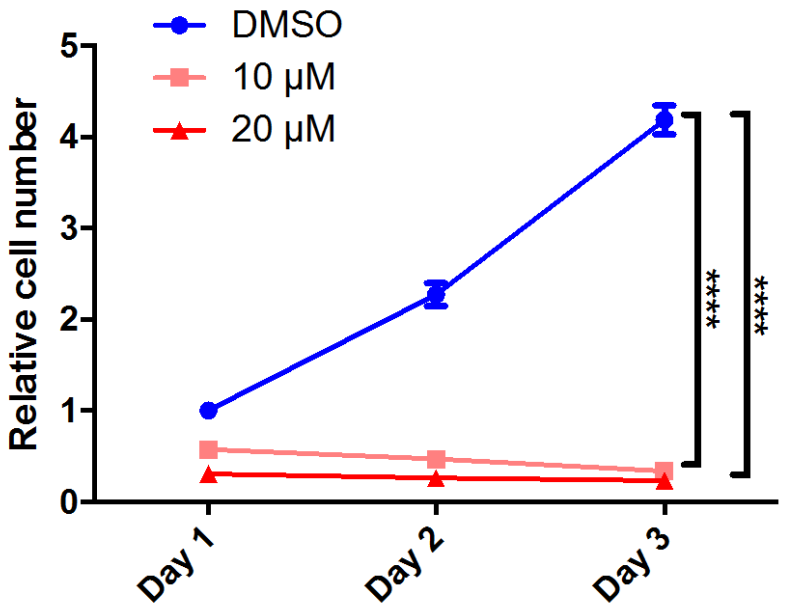
A



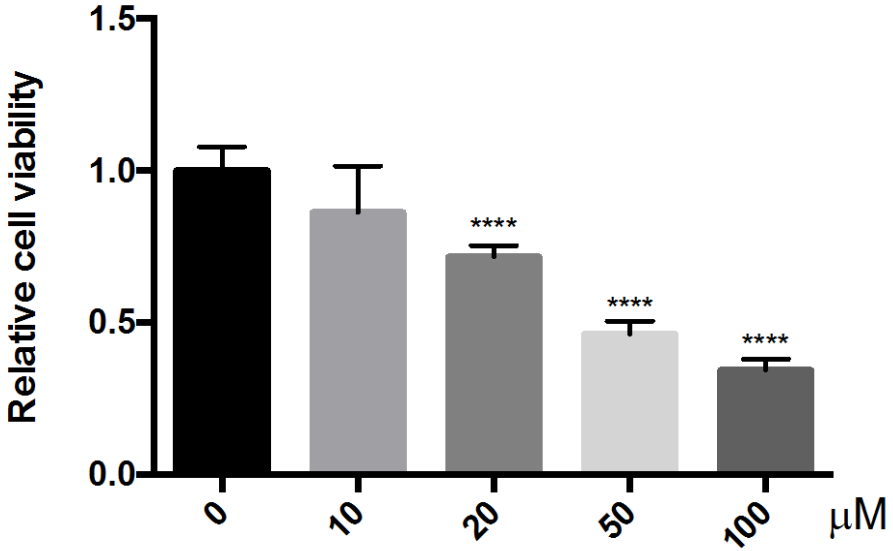
B



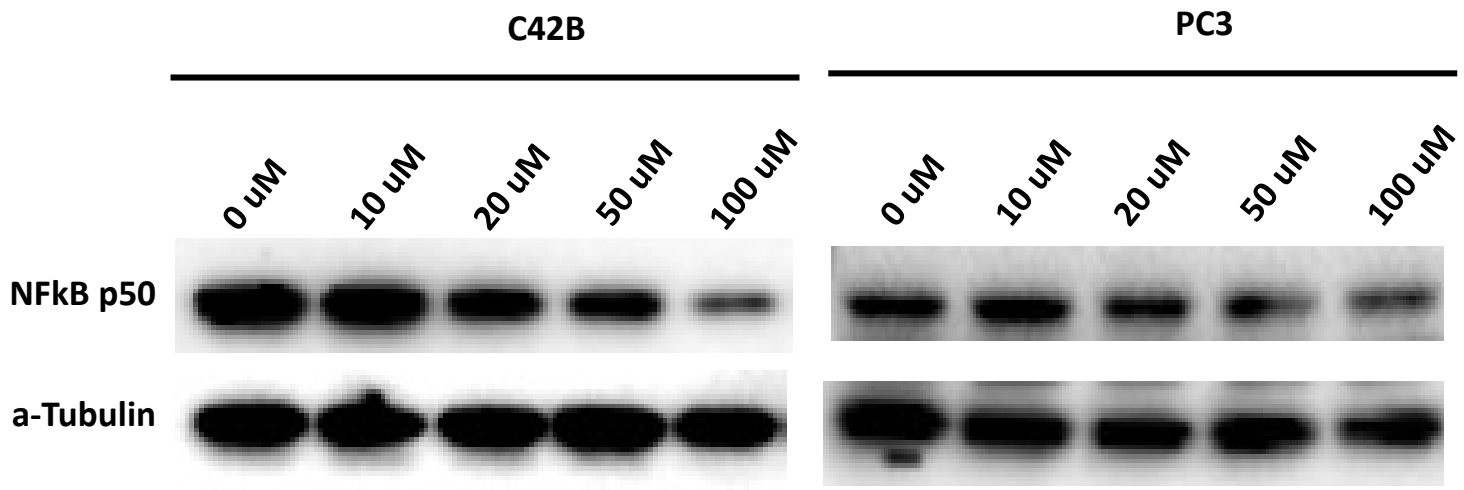
Supplementary figure 5



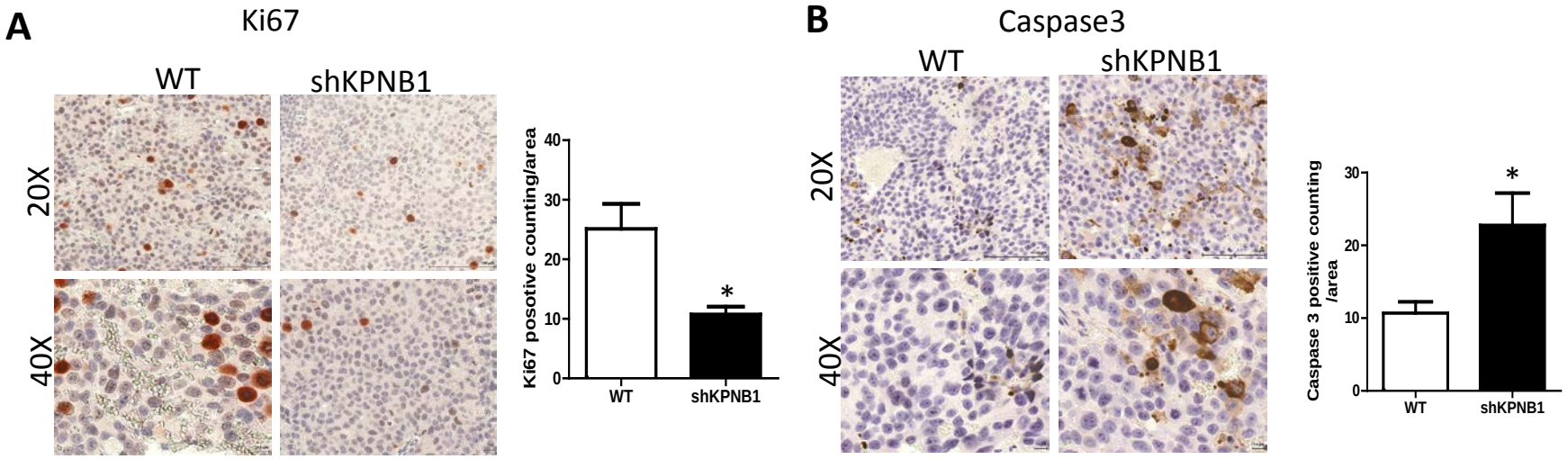
Supplementary figure 6



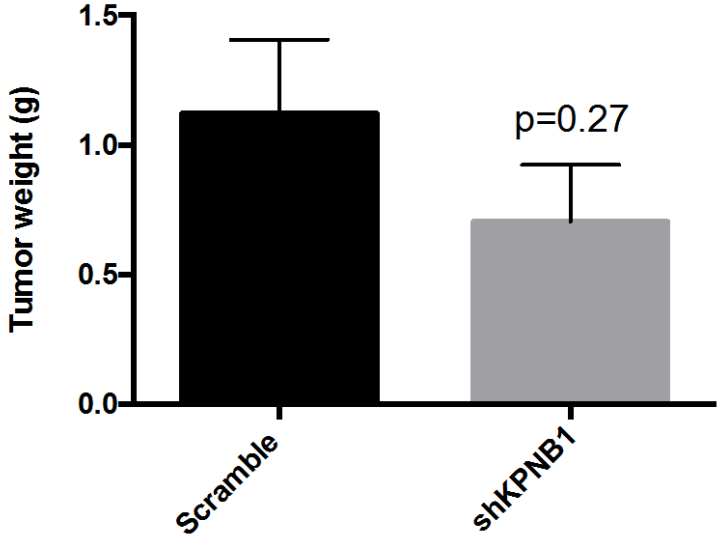
Supplementary figure 7



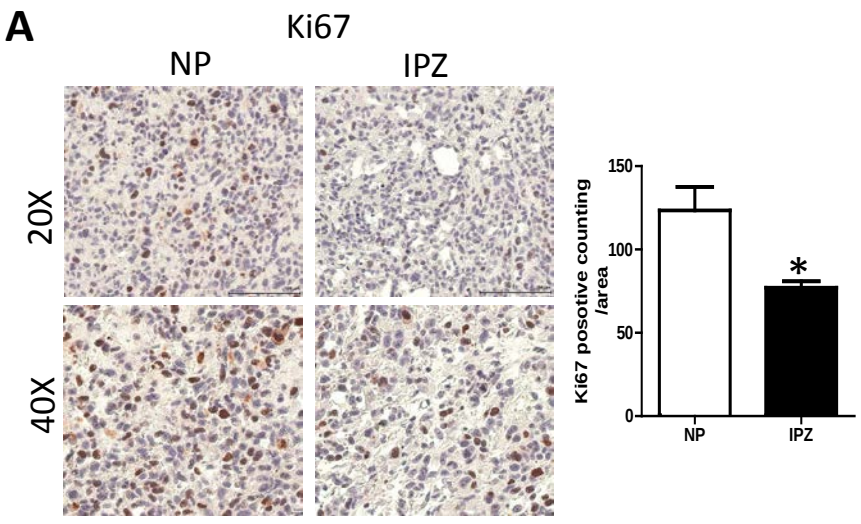
Supplementary figure 8

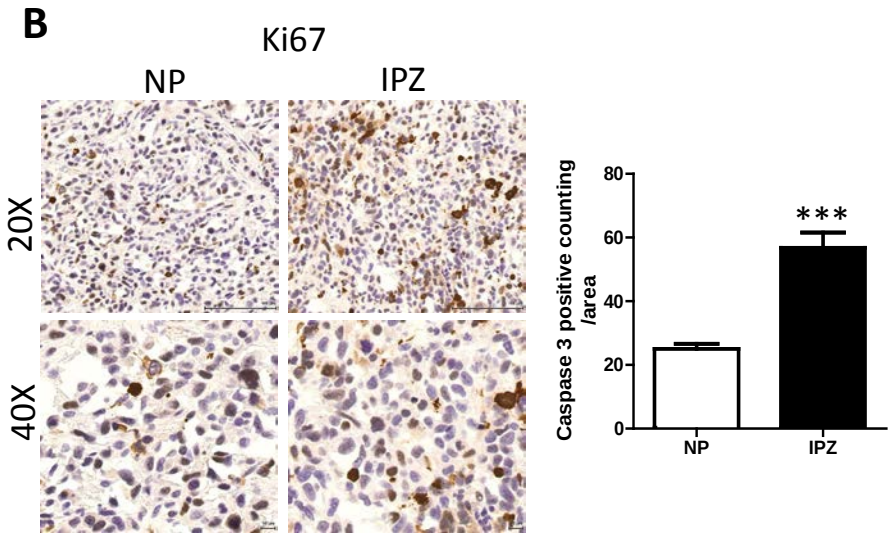


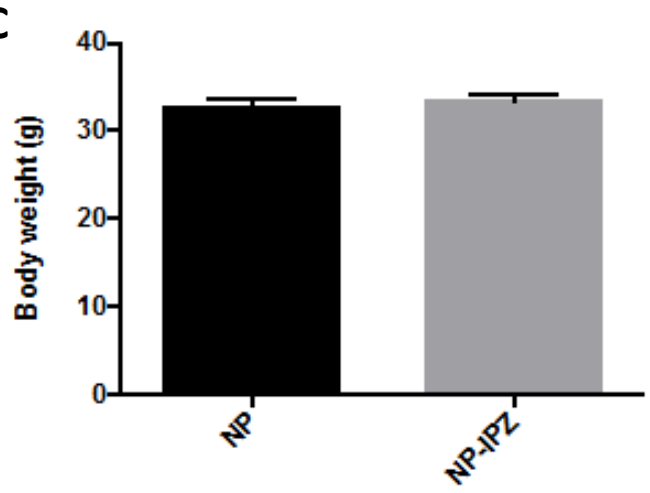
Supplementary figure 9



Supplementary figure 10







Supplementary table 1

Primer	Sequence
KPNB1-F	GACGATGACTGGAACCCCTG
KPNB1-R	GTTTGAGCTGACTGGGCTCT
FTH1-F	TCTCCTTAGTCGCCGCCAT
FTH1-R	AAACGTAGGAGGCGTAGAGC
KPNB1-promoter-1-F	TGCATGGGATAGAGCTAACAGT
KPNB1-promoter-1-R	CCCAAACTGCTGCAGCCTAC
KPNB1-promoter-2-F	GTAAGACTGGACTATGGCGGC
KPNB1-promoter-2-R	TGAGCTGATCCTCCGTTGTG

Supplementary Figure legends

S. Figure 1. KPNB1 expression is elevated in invasive mouse PCa tissue compared to PIN tissue. The GEO dataset includes 4 samples of PIN and 6 samples of invasive PCa tissues. *p <0.05.

S. Figure 2. KPNB1 knockdown decreases cytoplasmic c-Myc. PC3 and C4-2B cells were transfected with KPNB1 siRNA (50 mM) or control siRNA (50 nM) for 48 hours. Cytoplasmic protein was isolated for western blot. GAPDH was used as internal control.

S. Figure 3. c-Myc knockdown decreases KPNB1 expression. C4-2B were transfected with c-Mcy siRNA (50 mM) or control siRNA (50 nM) for 48 hours. Cytoplasmic and nuclear protein was isolated for western blot. GAPDH and Histone H3 were used as internal control for cytoplasm and nuclear, respectively.

S. Figure 4. The correlation between KPNB1 with RCC1 or Cyclin D1 by analyzing the TCGA dataset. y, the relative expression of A) Cyclin D1 or B) RCC1 RNA. x, the relative levels of KPNB1 RNA. Correlations were performed using Pearson's correlation analysis.

S. Figure 5. Importazole inhibits the growth of Myc-Cap cell line. 10,000 cells of Myc-Cap were seeded in 96-well plates. The cells were treated with 10 μM or 20 μM of importazole for 24 hours, 48 hours or 72 hours. DMSO was used as vehicle control. Growth curve was generated using crystal violet staining. ****p<0.0001.

S. Figure 6. Importazole inhibits the cell viability of RWPE1 at a higher dose in comparison with PCa cell lines. Ten thousands of RWPE1 cells were seeded in each well of a 96-well plate and treated with importazole of indicated concentrations for 48 hours. MTT assay was used to assess cell viability. ****p<0.0001.

S. Figure 7. Inhibition of KPNB1 using importazole reduces total expression of NF-κB p50. Immunoblotting results showing NF-κB p50 level of cytoplasm extraction of PC3 or C42B that was treated with DMSO or indicated concentrations of importazole. α-Tubulin was used as internal control.

S. Figure 8. KPNB1 knockdown decreases Ki67 and increases Caspase 3 *in vivo*. IHC staining of Ki67 and Caspase 3 using tumor tissue form mice bearing A) C4-2B-shScramble or B) C4-2B-shKPNB1 cells. *p <0.05, *** p<0.001.

S. Figure 9. Stable knockdown of KPNB1 in PCa cell line attenuates orthotropic tumor growth in vivo. A half million of C42B-scramble or C42B-shKPNB1 cells were inoculated in each of the nude mouse through intraprostatic injection. In 6 weeks post injection, tumor burdens were dissected and weighed.

S. Figure 10. Importazole decreases Ki67 and increases Caspase 3 in tumors *in vivo*. IHC staining of Ki67 and Caspase 3 using tumor tissue form mice bearing PC3 cells and treated with A) NP or B) NP-IPZ. Positive cells were quantified using Image J software. C) Body weight of mice in both groups on the day when tumors were harvested. *p <0.05, *** p<0.001.