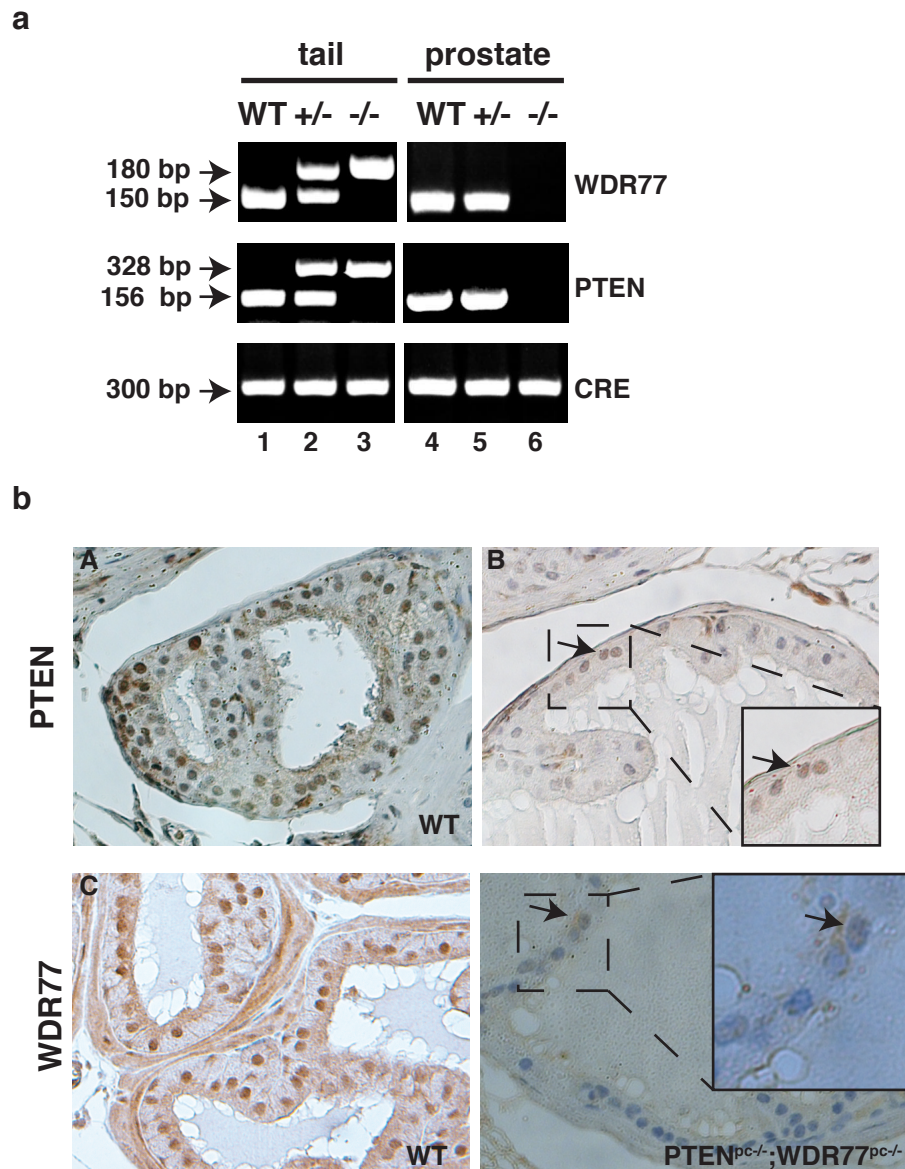
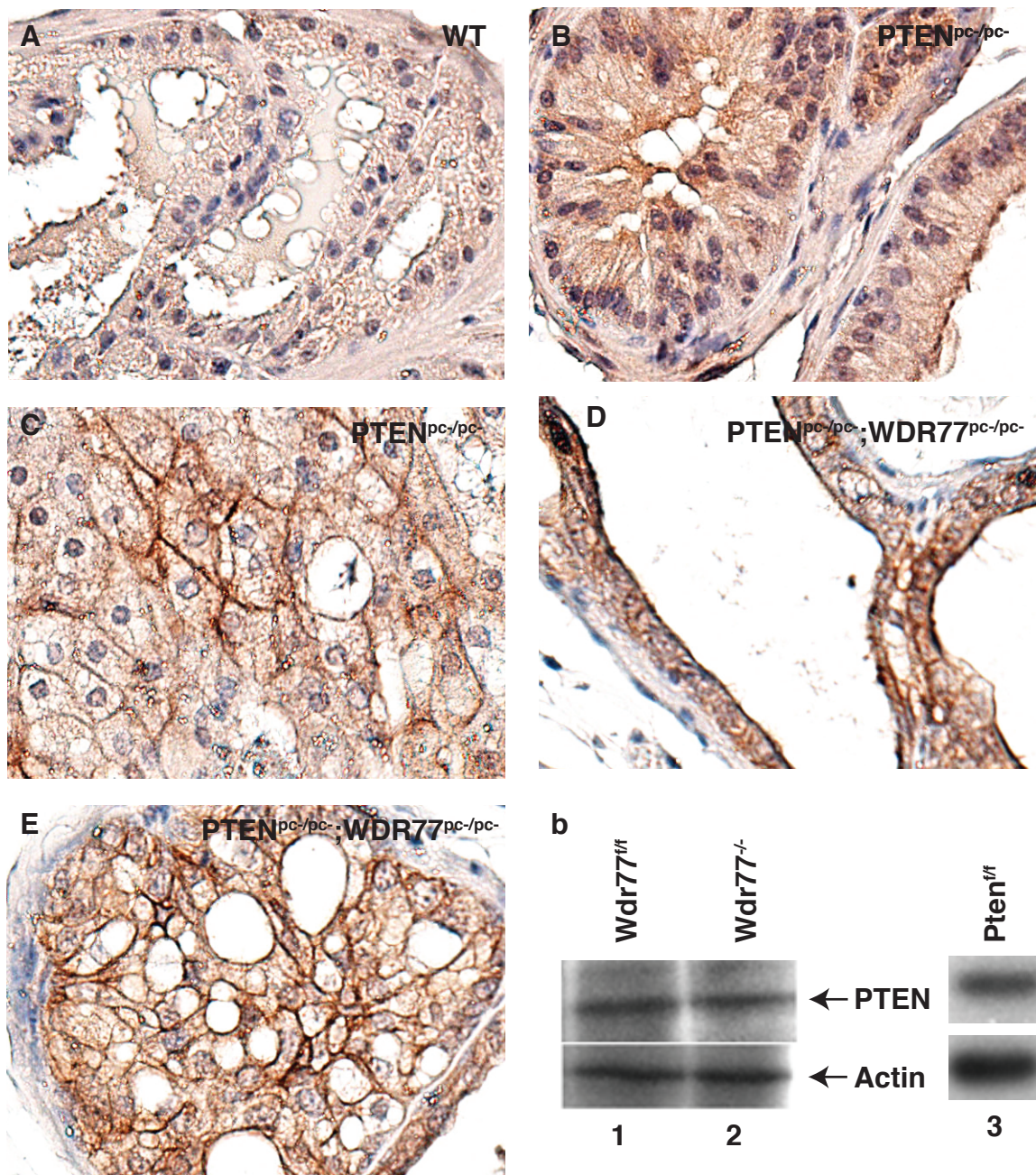


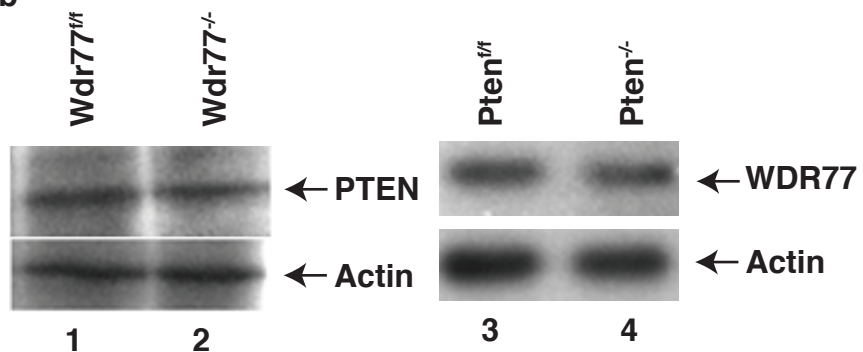


Supplementary Figure 1. The prostate-specific deletion of *Pten* and *Wdr77* genes in the mouse. (a) Gene typing of genomic DNA isolated from tails (lanes 1-3) and prostate glands. (b) Immunostaining of *Pten* and *Wdr77* proteins in prostate glands of WT (a, c) and *Pten*^{loxP/loxP};*Wdr*^{loxP/loxP};*Cre* (b, d) mice.

a



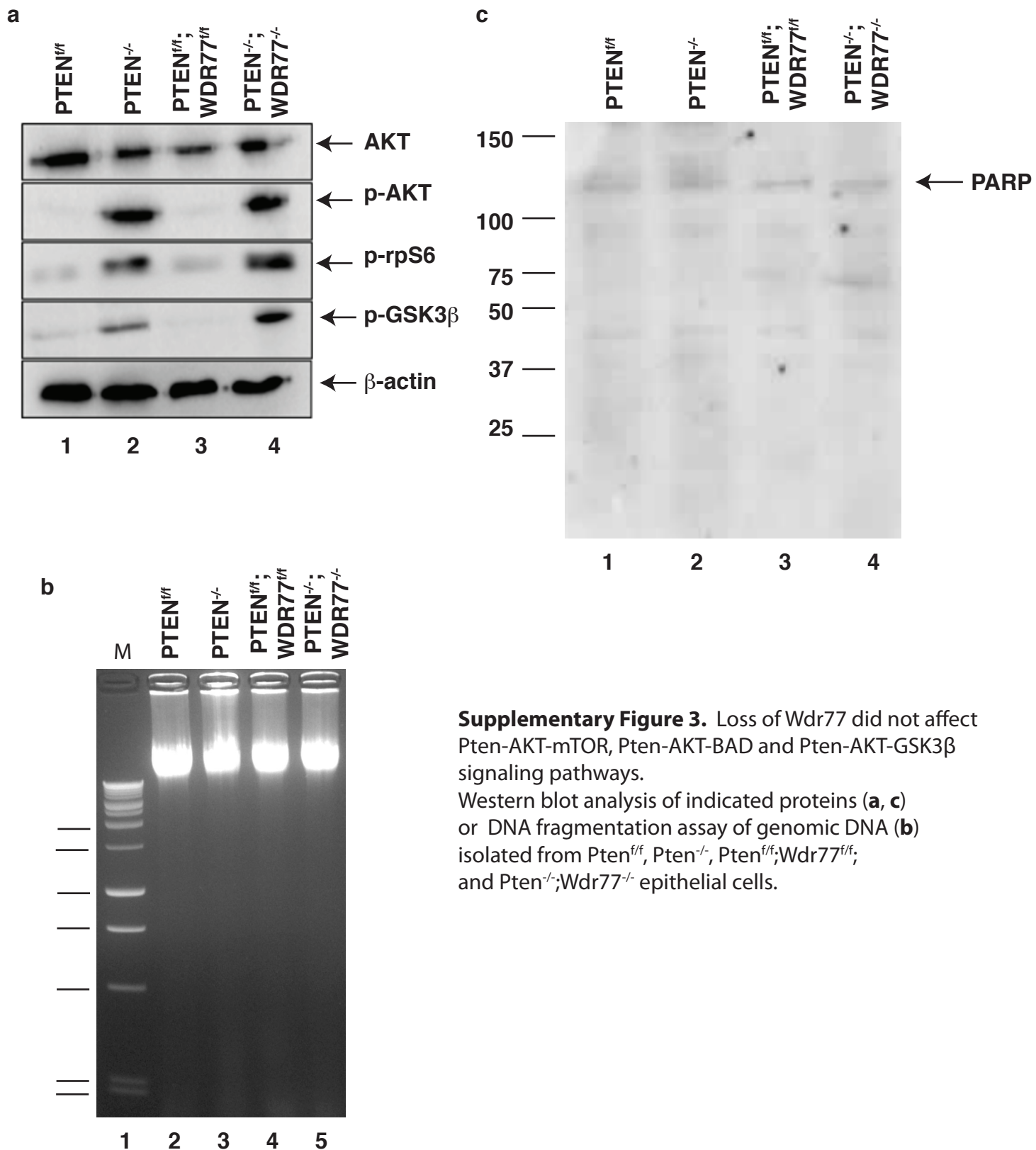
b



Supplementary Figure 2. Immunostaining and Western blot analysis.

(a) AKT phosphorylation induced by Pten gene deletion. Immunostaining of phosphorylated AKT (pAKT) in prostate tissues derived from WT, Pten^{pc/-}, and Pten^{pc/-};Wdr77^{pc/-} mice.

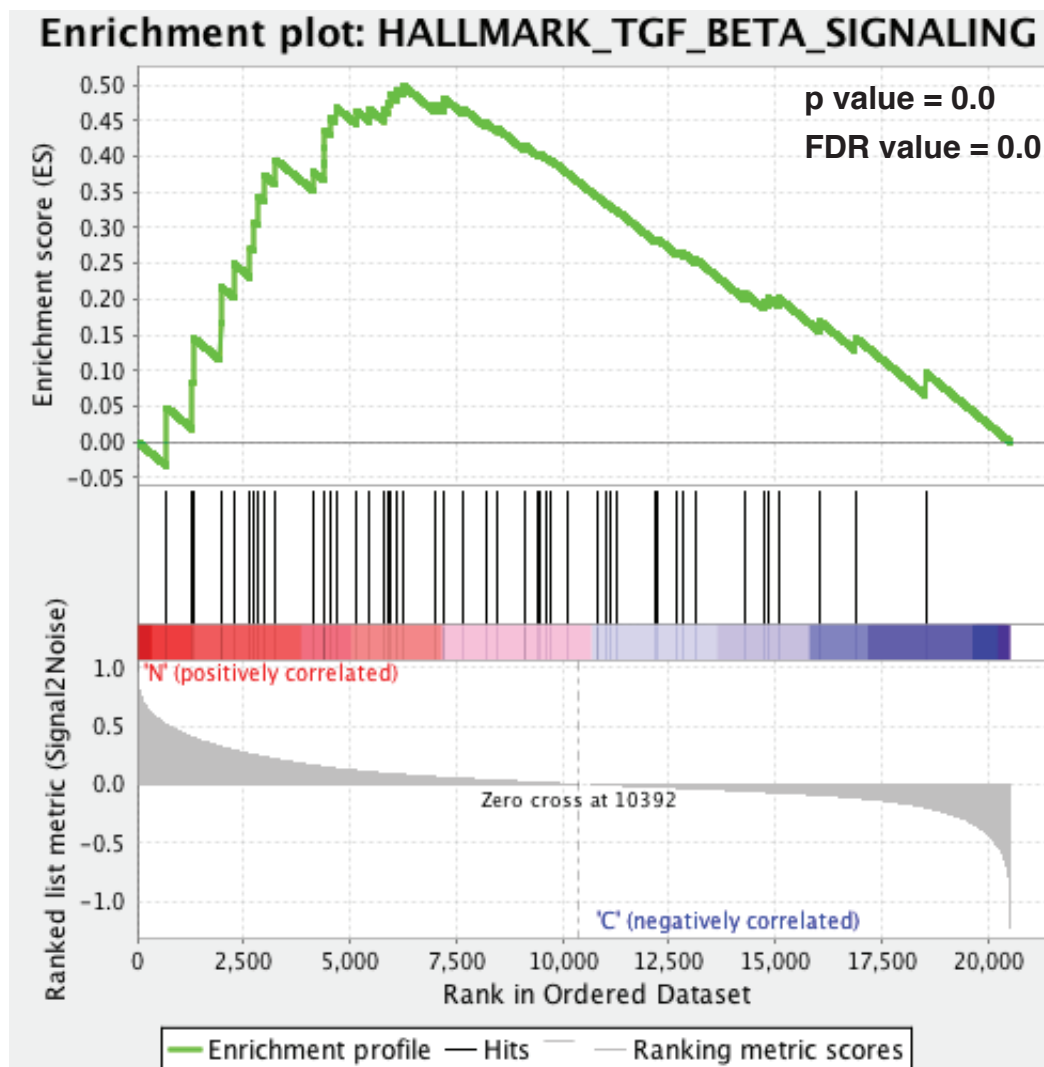
(b) Western blot analysis of Pten and Wdr77 expression in WT and Pten- or Wdr77-deleted prostate cells.



Supplementary Figure 3. Loss of Wdr77 did not affect Pten-AKT-mTOR, Pten-AKT-BAD and Pten-AKT-GSK3β signaling pathways.

Western blot analysis of indicated proteins (**a**, **c**) or DNA fragmentation assay of genomic DNA (**b**) isolated from Pten^{fl/fl}, Pten^{-/-}, Pten^{fl/fl};Wdr77^{fl/fl}; and Pten^{-/-};Wdr77^{-/-} epithelial cells.

a

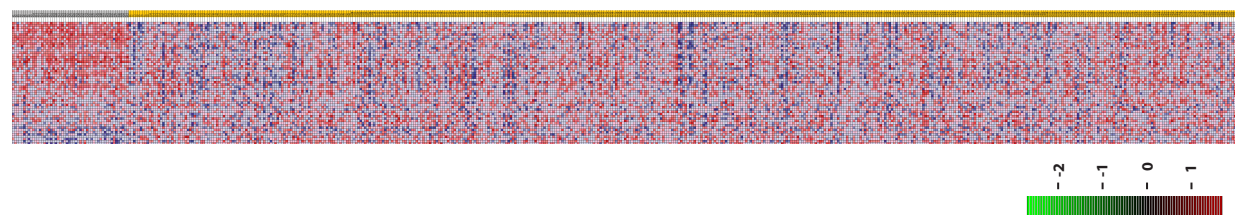


PTK3C2G
CA14
GCNT4
ASPA
PGM5P2
NKAPL
KY
TGSF1
SCN5A
CXCR2
HRASL55
KCNJ15
PAK7
C2orf88
RPF65
DHDP5L
PAK3
C10orf82
C14orf64
GPX2
RAB9B
PCP4L1
DAB1
PDE1C
AQP5
FAM83B
ARF
CCBE1
LGR6
ZNF157
MGAT4C
SLC2A9
SOSTDC1
CPNE6
EPHB1
TMIE
LY6G6D
STOX2
NPY6R
NRG2
OPRT
GPR156
HPD
MCF2
GLRA4
TMLHE
CLCA2
RHBDL3
DCC
CSRP3
NKX2-3
LOC100128675
DLX1
HOXC6
SLC45A2
DLX2
SNHG3
HOXC4
ZIC2
HOXC5
PRR7
HJURP
CCDC108
UCN
LMX1B
EPHA10
ONECUT2
CASKTN1
C2CD4C
SNHG4
CLEC18B
SLIT1
GAL
GSC
ZIC5
MMP26
LASS1
MYBL2
SKA3
MGC14436
LOC100129066
TROAP
KIF4A
PAOR6
CENPA
NETO2
LOC100130872
PCA3
C9orf163
C10orf95
MATK
LOC100287718
FOXO1
TOGAP3
NLBP12
CCDC78
CDC25C
TDRD1
SIM2
LOC100133612

b

normal
(n = 52)

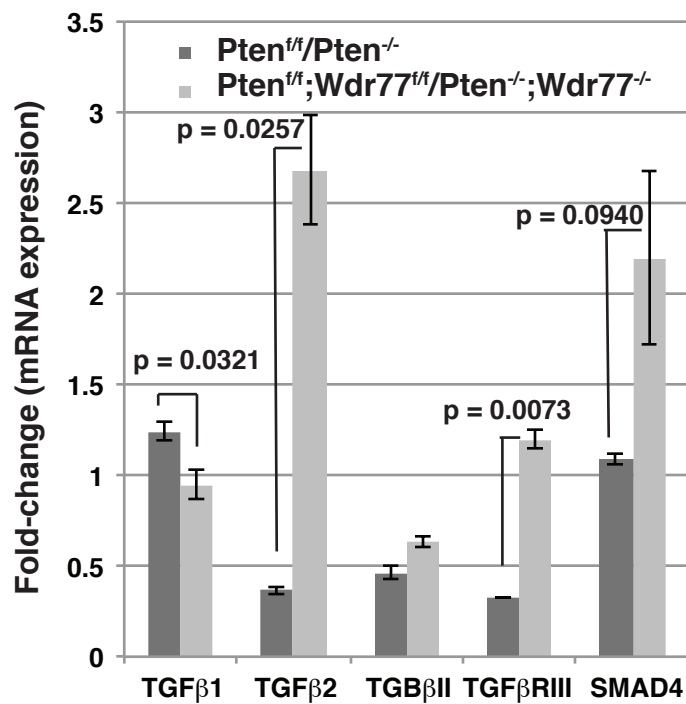
prostate cancer
(n = 498)



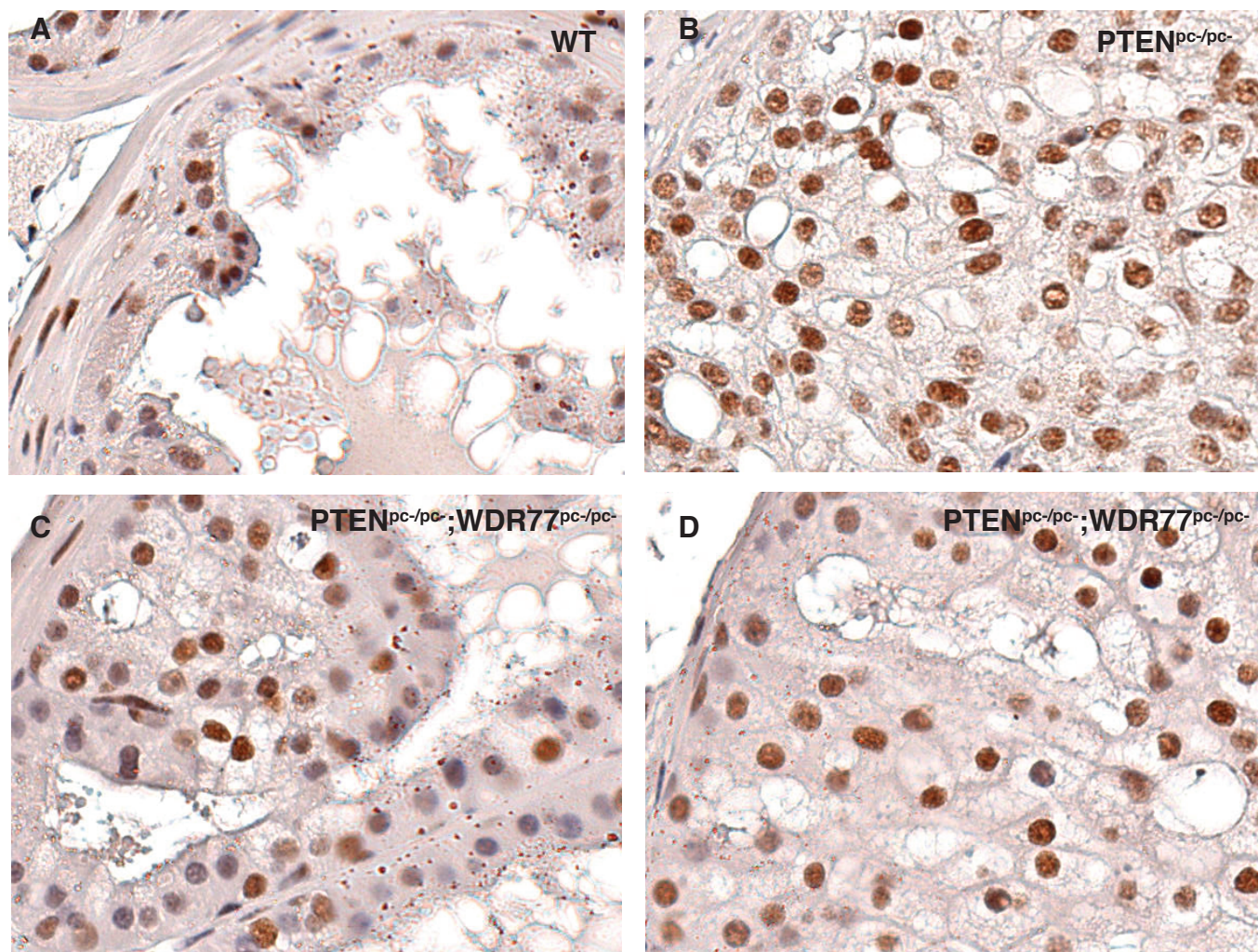
Supplementary Figure 4. Loss of TGF β signaling associated with prostate cancer.

(a) GSEA enrichment plot indicates that genes regulated by TGF β were over-represented on the gene list, whose expression is altered in prostate cancer.

(b) Genes targeted by TGF β are visualized by heatmap.

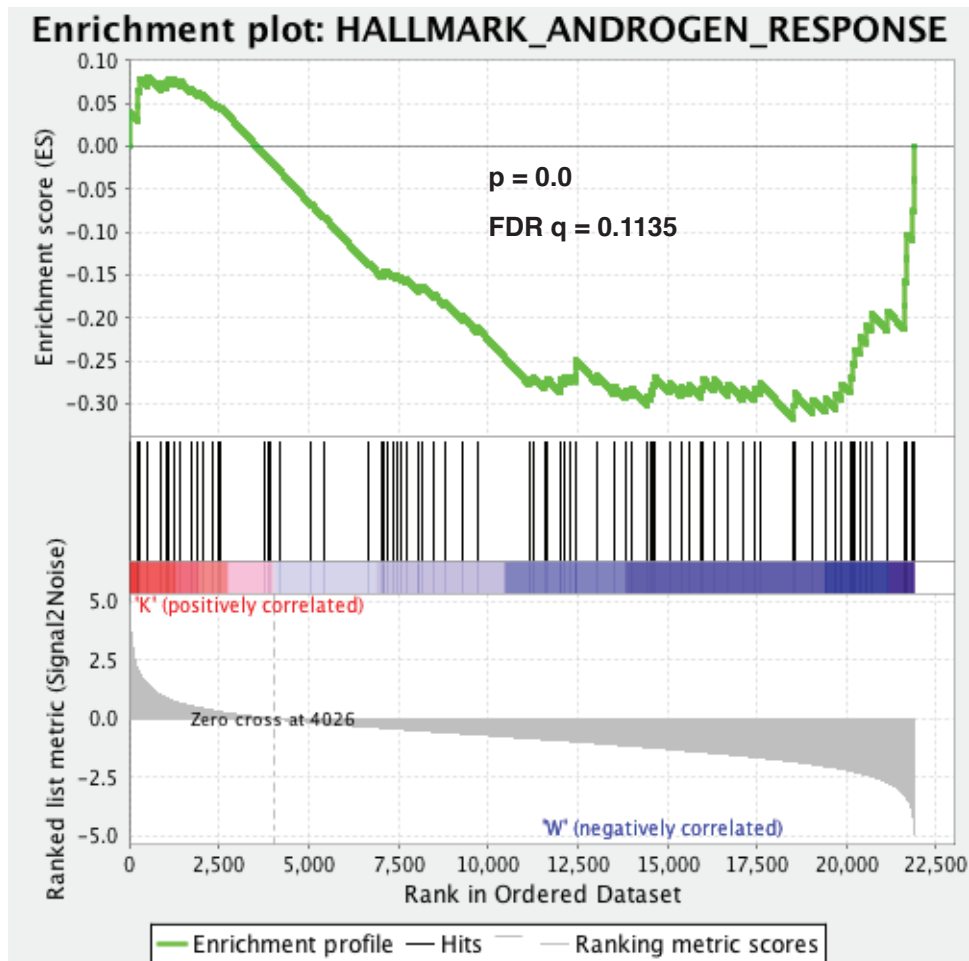


Supplementary Figure 5. RT-PCR analysis of expression of genes involved in TGFβ signaling. RNAs were isolated from *Pten^{fl/fl}*, *Pten^{-/-}*, *Pten^{fl/fl};Wdr77^{fl/fl}*, and *Pten^{-/-};Wdr77^{-/-}* epithelial cells and submitted for real-time PCR analysis. Fold-change = relative expression in loxP-floxed cells/ relative expression in cells with deletion of *Pten* or *Pten* plus *Wdr77* genes.

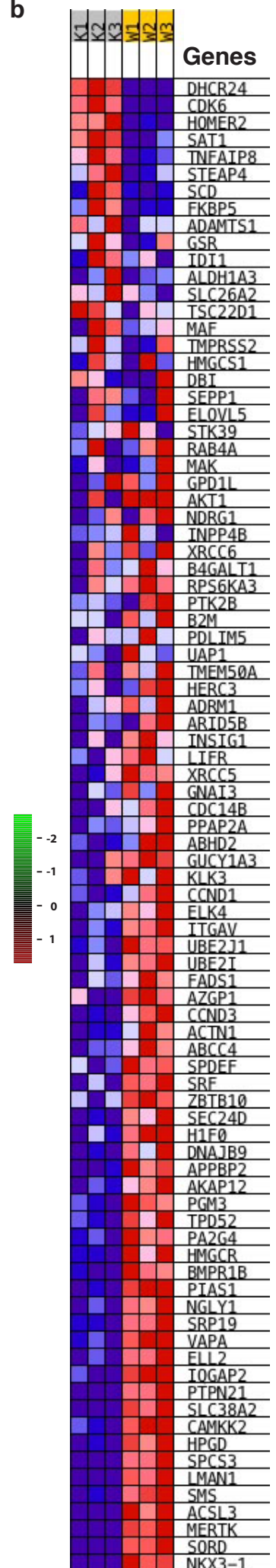


Supplementary Figure 6. AR expression is induced by Pten loss. Immunostaining of AR in prostate tissues derived from WT, Pten^{pc-/pc-}, and Pten^{pc-/pc-};Wdr77^{pc-/pc-} mice.

a



b



Supplementary Figure 7. Pten loss decreased the AR signaling in the prostate. **(a)** GSEA enrichment plot indicates that genes regulated by AR were over-represented on the gene list, whose expression is altered by Pten loss. **(b)** Genes targeted by AR are visualized by heatmap.

sTable 1: Mouse Primers for Real Time PCR	
Target Genes	Sequence 5'-3'
TGFβ1	F: AGCTGCGCTTGCAGAGATTA R: AGCCCTGTATTCCGTCTCCT
TGFβ2	F: TCCCCTCCGAAAATGCCATC R: TGCTATCGATGTAGCGCTGG
TGFBRII	F: CCAAGTCGGATGTGGAAATGG R: TGTCGCAAGTGGACAGTCTC
TGFBRIII	F: CTGCCAAGGGAGGTTACAT R: AACCTCCGAAACCAGGAAG
Smad4	F: GAGAGAGCGAGGTTGCACAT R: ACCTTTATATACGCGCTTGGGT