

Table S1 Primer sequences for qPCR

Gene	Forward primer	Reverse primer
<i>GAPDH</i>	ACCCAGAAGACTGTGGATGG	TCTAGACGGCAGGTCAGGTC
<i>SMAD4</i>	CTCATGTGATCTATGCCCGTC	AGGTGATACTCGTTCGTAGT
<i>KRAS</i>	CAGTAGACACAAAACAGGCTCAG	TGTCGGATCTCCCTACCAATG
<i>CDKN2A</i>	CTCGTGCTGATGCTACTGAGGA	GGTCGGCGCAGTTGGGCTCC
<i>ZIP4</i>	CGAGGTCCCTATGACGCTG	CACTCAGGCATACCGTGTCC
<i>ATM</i>	GGCTATTCAGTGTGCGAGACA	TGGCTCCTTTCGGATGATGGA
<i>BRCA1</i>	ACCTTGGAAGTGTGAGAAGTCT	TCTTGATCTCCCACACTGCAATA
<i>BRCA2</i>	ACAAGCAACCCAAGTGTAAT	TGAAGCTACCTCCAAAAGTGTG
<i>PDX1</i>	GAAGTCTACCAAAGCTCACGCG	GGAAGTCTTCTCCAGCTCTAG
<i>EGFR</i>	AGGCACGAGTAACAAGCTCAC	ATGAGGACATAACCAGCCACC
<i>STAT</i>	CAGCAGCTTGACACACGGTA	AAACACCAAAGTGGCATGTGA
<i>VGFR</i>	GGCCAATAATCAGAGTGGCA	CCAGTGTCAATTCGGATCACTTT

qPCR, quantitative polymerase chain reaction.

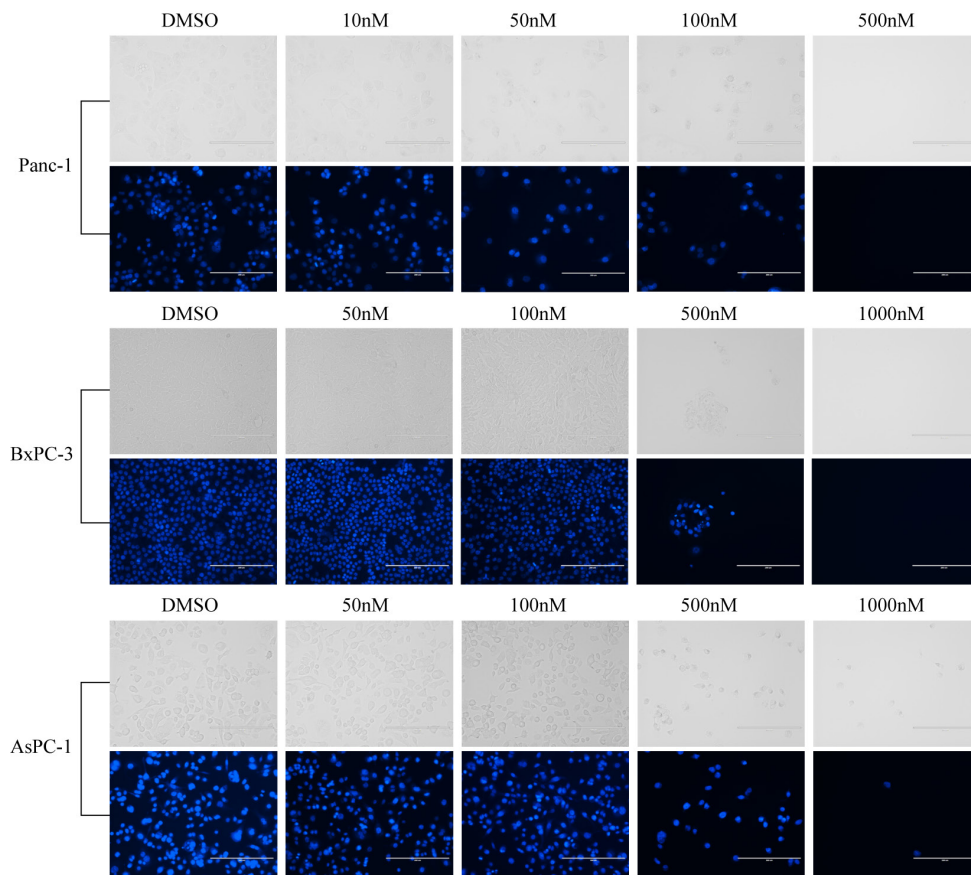


Figure S1 PC cells and their nuclear morphology observation. PC cells were treated with indicated concentrations of Pro A for 48 h. Cell morphology were observed under inverted cell microscope. Nuclear morphology were observed under fluorescent microscope after DAPI staining. Bars: 200 μ m. DMSO, dimethyl sulfoxide; PC, pancreatic cancer; Pro A, proscillaridin A; DAPI, 4',6-Diamidino-2'-phenylindole.

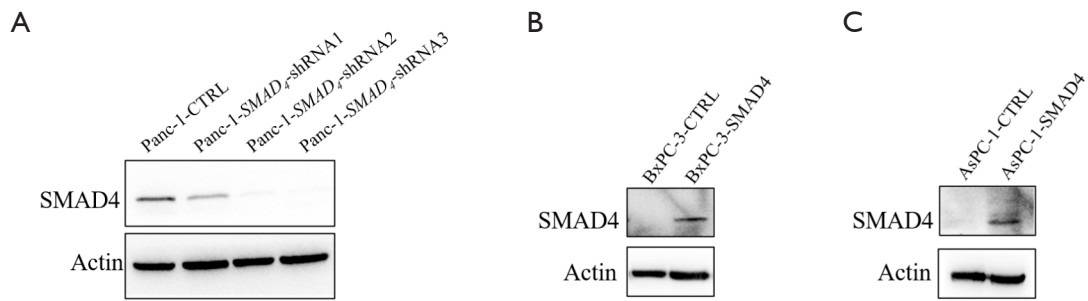


Figure S2 Knock down of SMAD4 in Panc-1 cells and over-expression SMAD4 in BxPC-3 and AsPC-1 cells. Western blot analysis was used to SMAD4 knock down confirmation in Panc-1 cells (A) and over-expression confirmation in BxPC-3 (B) and AsPC-1 (C) cells. PC, pancreatic cancer.

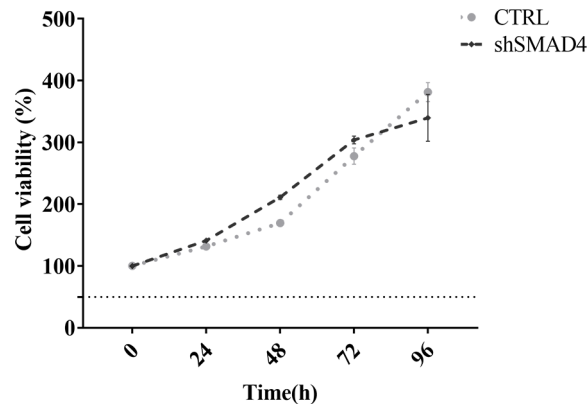


Figure S3 Knock down of SMAD4 appeared to have no significant effect on cell proliferation in Panc-1 cells. SMAD4 was knocked down in Panc-1 cells and CCK-8 assay was used to determine the cell viability in Panc-1-CTRL cells and Panc-1-shSMAD4 cells. Experiment was repeated three times. CCK-8, cell counting kit-8.