**Supplementary Figure Legends**

**Figure S1. Effects of Methylation-reducing agent and ESE3 on pancreatic cancer growth and migration *in vitro***. A and B, the cell viability and proliferation of PANC-1 and　MIA-PaCa-2 cells treated with 5-AdC were determined by MTT and colony-formation assays. C, Wound-healing assays were used to compare the motility of PANC-1 cells (upper panel) and MIA-PaCa-2 (lower panel) treated with 5-AdC for 24 hours. D, Comparison of the migration and invasion of PANC-1 cells (upper panel) and MIA-PaCa-2 (lower panel) treated with 5-AdC for 24 hours using Boyden chambers. E, Representative images of colonies of PANC-1 and MIA-PaCa-2 cells transfected with pCDH-Vector or pCDH-ESE3. F, Western blot analysis of PARP and cleaved PARP (c-PARP) protein expression in PANC-1 and MIA-PaCa-2 cells transfected with pCDH-ESE3 and siESE3 #3, respectively. WT, wild-type; siNC, negative control siRNA.

**Figure S2. The basal expression of ESE3 in four PDAC cell lines by Western blotting experiment**. PANC-1, BxPC-3, CFPAC-1 and AsPC-1 PDA cell lines were cultured in vitro. Total protein lysates were prepared and subjected to Western blot analysis for ESE3 protein expression levels. Equal protein sample loading was monitored by probing β-actin.

**Figure S3. Regulation of EMT marker expression by ESE3**. PANC-1 and CFPAC-1 cell lines were transfected with pCDH-Vector and pCDH-ESE3 plasmid and evaluated the expression of ESE3, E-Cadherin, Snail and Vimentin.

**Figure S4. Impact of altered expression of ESE3 on pancreatic tumor growth in nude mice**. The orthotopic pancreatic cancer mouse model was established by injection into the pancreas of nude mice with Panc-1/pCDH-Vector and Panc-1/pCDH-ESE3 stable cell lines. Representative images of primary pancreatic tumor and metastatic tumors of liver, gut and mesentery were shown.