Supplementary Figures and Tables Legends

Supplementary Figure 1. Characterization of 23 PDAC cell lines. A. *ARID1A* mutational analysis of 7 PDAC cell lines. **B.** Odds of transcriptomic basal class enrichment for 18 PDAC cell lines and 5PDX-derived line, calculated by the pan-platform basal-like classifier, as presented by Moffitt *et al.* (4). **C.** Immunoblotting analysis of BAF complex proteins across PDAC cell lines in study.

Supplementary Figure 2. Knocking out *ARID1A* does not impair viability in PDAC cell lines. A. T7 endonuclease I (T7E1) assay in SUIT2, HuPT4, and PATC153 cell lines. The following bands` sizes were observed in *ARID1A* knock-out samples: 496 bp, 299 bp and 191 bp. NC: negative control; DT: digested with T7 endonuclease. **B.** Immunoblotting analysis for ARID1A and beta actin (ACTB) in parental cells, non-targeting guide RNA construct (NT sgRNA), and isogenic cell lines with *ARID1A* deletion accomplished using one of 2 independent guide RNA constructs (sg*ARID1A*-1 or sg1, sg*ARID1A*-2 or sg2). **B.** Cell growth curves (n=6), **D.** Clonogenic assay: cells were treated for 14 days. **E.** Acetic acid assay (n=3), and **F.** Annexin V assay for cells described in (A). Data represent mean ± SD; **, P <0.01; *, P <0.05; NS: not significant.

Supplementary Figure 3. NVP-AUY922 toxicity *in vivo* and effect of gemcitabine treatment in *ARID1A* knock-out PDAC models *in vitro* and *in vivo*. A. Effect of NVP-AUY922 on SUIT2-injected-mice body weight. Body weights at baseline and after 24

days of treatment with NVP-AUY922. NS: not significant. **B.** Immunohistochemistry of tumors generated from *ARID1A* knock-out cells and parental cells, treated with vehicle (top panel). Staining were quantified NOVARED positive area/Nuclear area (bottom panel). Data represent mean ± SD (n=5). **, P <0.01. Scale bars, 200 um. **C.** Growth inhibition assay in parental cells and *ARID1A* knock-out cells treated with gemcitabine. Growth inhibition was measured as cell viability after treatment with gemcitabine for 72 hours. Data represent mean ± SD (n=4). **D.** SUIT2-injected mice tumor burden (left panel) and body weight (right panel), after vehicle or gemcitabine treatment (100 mg/kg), performed every 4 days for 16 days via intraperitoneal injection. Tumor volume was measured every 3 days after starting treatment until day 24. Data represent mean ± SD (n=5). Body weights at baseline and after 24 days of treatment with gemcitabine.

Supplementary Table 1. Comparison of IC_{50} values based on the gene mutational status.

Supplementary Table 2. Combined MSigDB Hallmark GSEA results for differential expression profiles of *ARID1A* knock-out cells versus parental SUIT2, HuPT4, and PATC153 cells.