**Supplemental Figure 1. Creation and characterization of EcSOD stably expressing PDA cell lines.**

**(A)** Relative EcSOD expression was examined in HPNE, MiaPaCa-2, Panc-1, and BxPC-3 cells using qRT-PCR. Coding Region of SOD3: (SG) = ((5’)GATCCGAGACATGTACGCCAA(3’) and 5’)TGCATGACCTCCTGCCAGA(3’)); 18s (SG)=((5’)GCCCGAAGCGTTTACTTTGA(3’) and (5’)TCATGGCCTCAGTTCCGAA(3’)). The data represent fold-change compared to HPNE cells. The three primary human PDA cell lines all showed significant decreases in EcSOD expression relative to HPNE, consistent with the observation in primary human PDA tumors. *p* < 0.0001 (at least triplicate).

**(B)** Relative EcSOD expression was examined in cells created to stably overexpress EcSOD or vector control (Bx-EcSOD or Bx-Control; Mia-EcSOD or Mia-Control) using qRT-PCR. The data are presented as fold-change compared to control. EcSOD stably expressing cells displayed a significantly higher amount of relative EcSOD expression. *p* < 0.0001 for both (at least triplicate)

**(C)** Cell lysates (intracellular “IC”) and media (extracellular “EC”) from stably overexpressing BxPC-3 and MiaPaCa-2 cells were separated on denaturing gels, blotted onto nitrocellulose membranes, and analyzed with the indicated antibodies. Cells created to overexpress EcSOD showed a significant increase in both extracellular and intracellular EcSOD. Differences were not seen with MnSOD or CuZnSOD between the two generated cell lines (at least triplicate).

**Supplemental Figure 2. Activity of EcSOD activity from stably expression PDA cell lines.**

Cells in culture can release EcSOD into medium. Using two different assays, EcSOD activity is shown to be significantly higher in media from cells that stably over express EcSOD. In each approach xanthine oxidase is used to generate superoxide. In the colorimetric assay O2•- reacts with WST-1 resulting in a color change in WST-1; in the EPR assay O2•- reacts with DMPO to produce a specific unique spin adduct, DMPO/•OOH. In the presence of EcSOD, these reactions are suppressed.

**(A) Colorimetric Assay.** When medium from cells that overexpress EcSOD is included in the assay solution, the change in color of WST-1 is suppressed indicating the presence of active EcSOD enzyme. Mean ± SE. *p* < 0.001 for BxPC-3 and *p* = 0.0003 for MiaPaCa-2.

**(B)** **EPR Assay**. Example spectra of DMPO/•OOH from the EPR-based assay for EcSOD activity; these spectra are of the low-field line of DMPO/•OOH centered at approximately 3487 G. The species at approximately 3484 G is the low-field line of the DMPO/•OH adduct. The concentration of EcSOD that accumulated in cell culture media was determined by a kinetic analysis of the competition of the reaction of O2•- with DMPO. One unit of activity (50% inhibition of the DMPO/•OOH signal) for EcSOD corresponds to a concentration of 2.4 x 10-10 M of fully active EcSOD tetramers. Combining the results with number of cells, volume of media over cells, and time in culture media allows a estimation of that the rate at which fully active EcSOD tetramers is made by cells and released into the media. For BxPC3 cells under our experimental conditions this rate was (1.8 ± 0.2) zmol cell-1 s-1(zmol = 10-21), *n* = 3 in each of triplicate determinations. This absolute quantitative information can be compared directly with similar results from other laboratories.

**Supplemental Figure 3. L-NNA decreases NOS activity in PDA cells.** Media from BxPC3-control cells incubated with or without 100 µM L-NNA for 24 hrs were assayed for nitrite concentration using media without FBS or phenol red and compared to a nitrite standard curve for each assay. The data were normalized per cell.