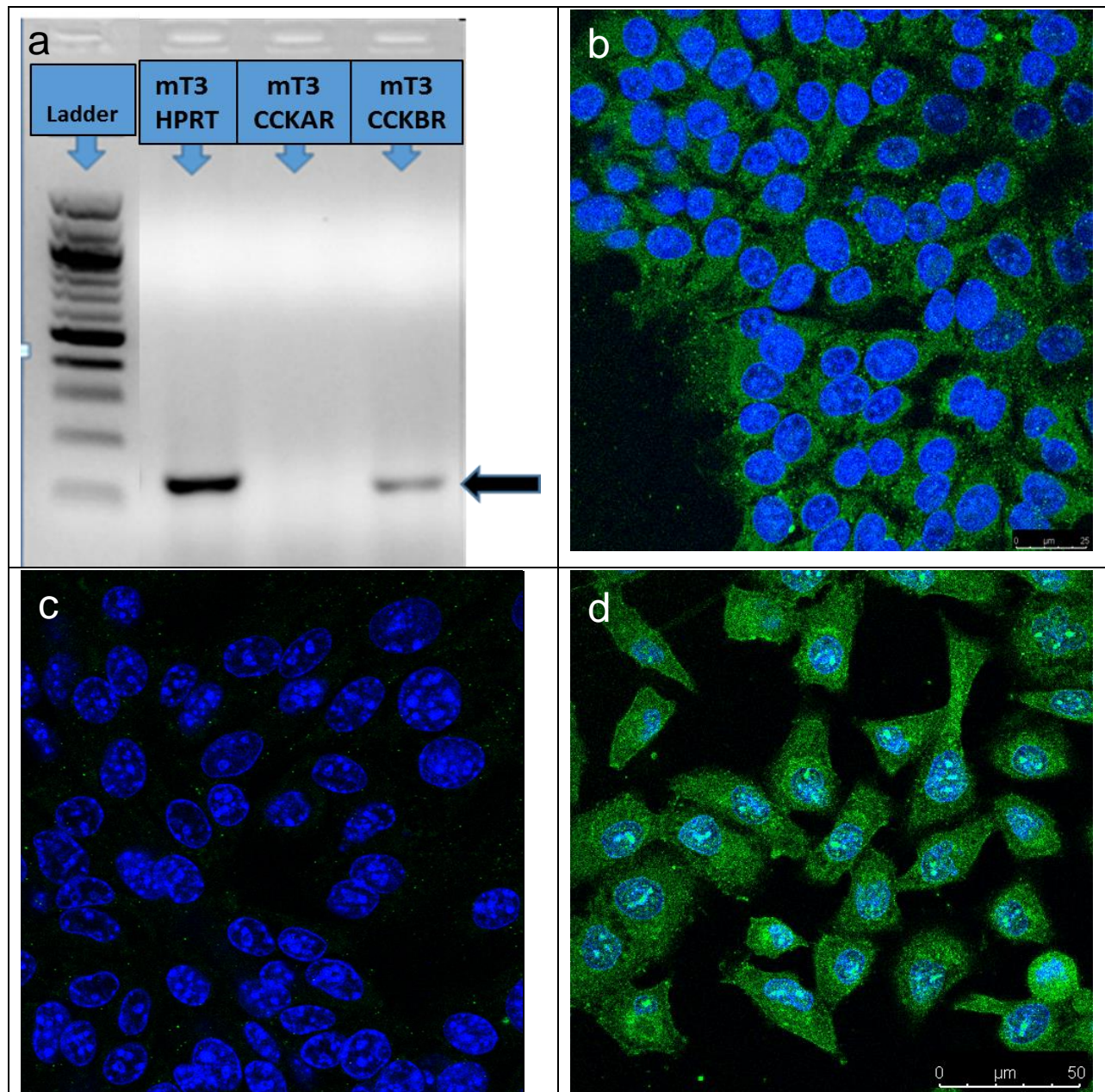
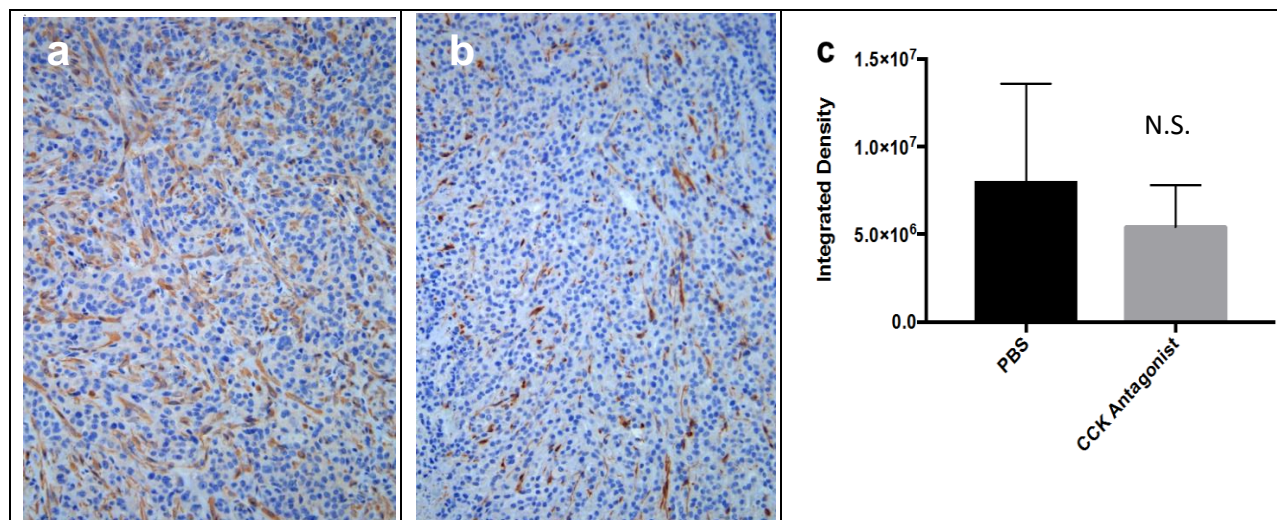


**Supplementary Figure 1.** Kaplan Meier survival curve with Proglumide and PD-1 Ab. In this experiment, mice were inoculated with a greater burden of Panc02 cancer cells ( $2 \times 10^6$ ). Then mice were treated with either the PD-1 immune checkpoint antibody, proglumide, or the combination. Combination therapy with the CCKR antagonist and the immune checkpoint blockade antibody rendered the longest survival (\*\*\*) ( $p < 0.001$ ).



**Supplementary Figure 2.** Characterization of CCK-B receptors on mT3 cells. (a) Gel electrophoresis of RT-PCR products showing that mT3 Murine cancer cells have CCK-B and not CCK-A receptors. HPRT serves as a positive control to confirm integrity of RNA. (b) Immunofluorescence of CCK-B receptor reacted with Dylight 488 CCK-B receptor antibody on mT3 murine cancer cells by confocal microscopy. (c) Hoescht stain demonstrates nucleus of mT3 cells. (d) PANC-1 human pancreatic cancer cells with CCK-B receptors serve as a positive control.



**Supplementary Figure 3.**  $\alpha$ -SMA staining by IHC in mT3 mouse pancreatic cancer tumors. (a) Activated fibroblasts are shown with  $\alpha$ -SMA staining in a tumor of a PBS treated mouse. (b)  $\alpha$ -SMA staining in a tumor of a mouse treated with proglumide is shown. (c) Densitometry analysis of  $\alpha$ -SMA reacted tumors (N=10 each) shows lower  $\alpha$ -SMA staining in mice treated with the CCK receptor antagonist but this did not reach significance ( $p=0.21$ ).