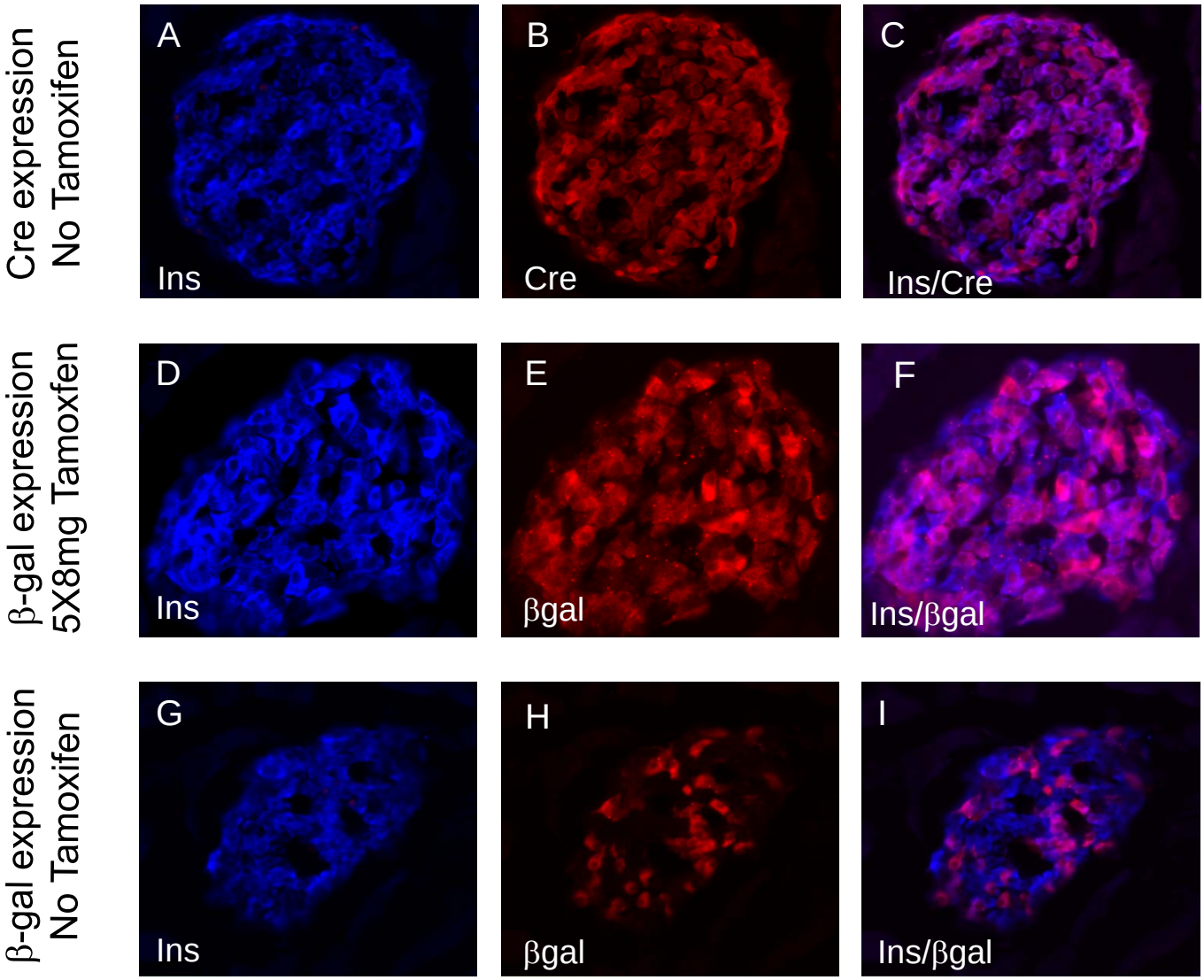

Figure 5. Characterization of basal and induced recombination in RIP-Cre^{ER}; ROSA26 mice. Immunofluorescence was performed on serial cryosections of adult pancreas for insulin (A,D,G), Cre (B), and β-gal (E,H). Co-localization of insulin and Cre and insulin and β-gal are shown in the merged images (C,F,I). Metamorph analysis was performed to quantify β-gal expression in islets of transgenic mice that had not been injected with tamoxifen, and those that had received 3 injections of 8 mg of tamoxifen. β-gal was expressed in ~ 75-80% of beta cells of islets from tamoxifen treated mice (n=3 mice). In bigenic mice not treated with tamoxifen (n= 6 mice), ~12.8% +7.3% SD of beta cells were positive for β-gal.

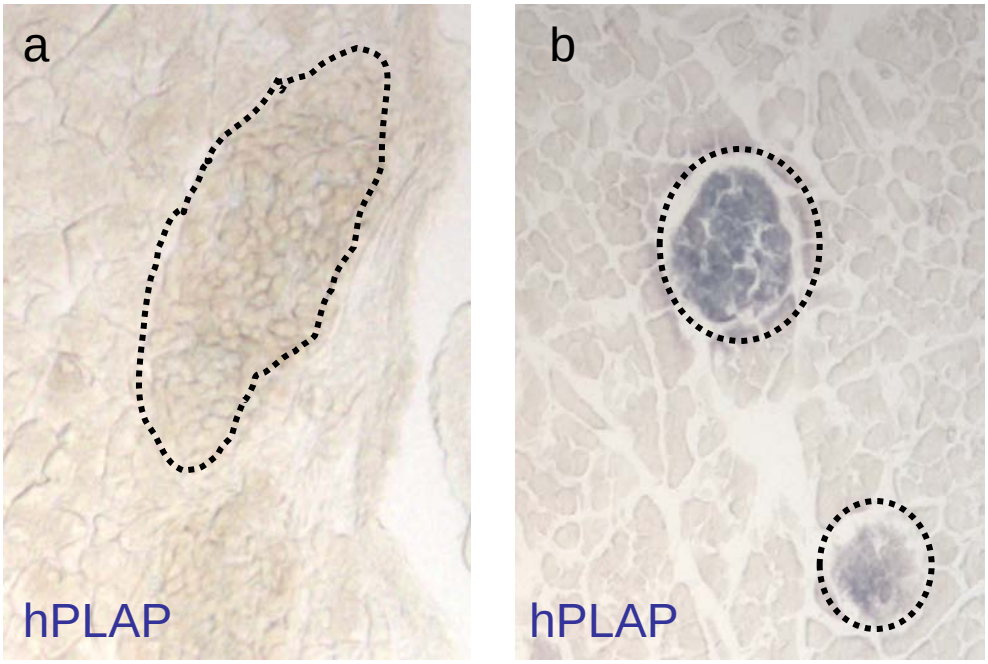

Figure 6. Analysis of recombination in RIP-Cre^{ER}; Z/AP mice. Cryosections from adult pancreas were stained for hPLAP. (a) Islets from double transgenic mice that had not received tamoxifen were negative for hPLAP expression. (b) Whereas islets from bigenic mice that were injected 3 times with 8 mg of tamoxifen were positive for hPLAP expression.

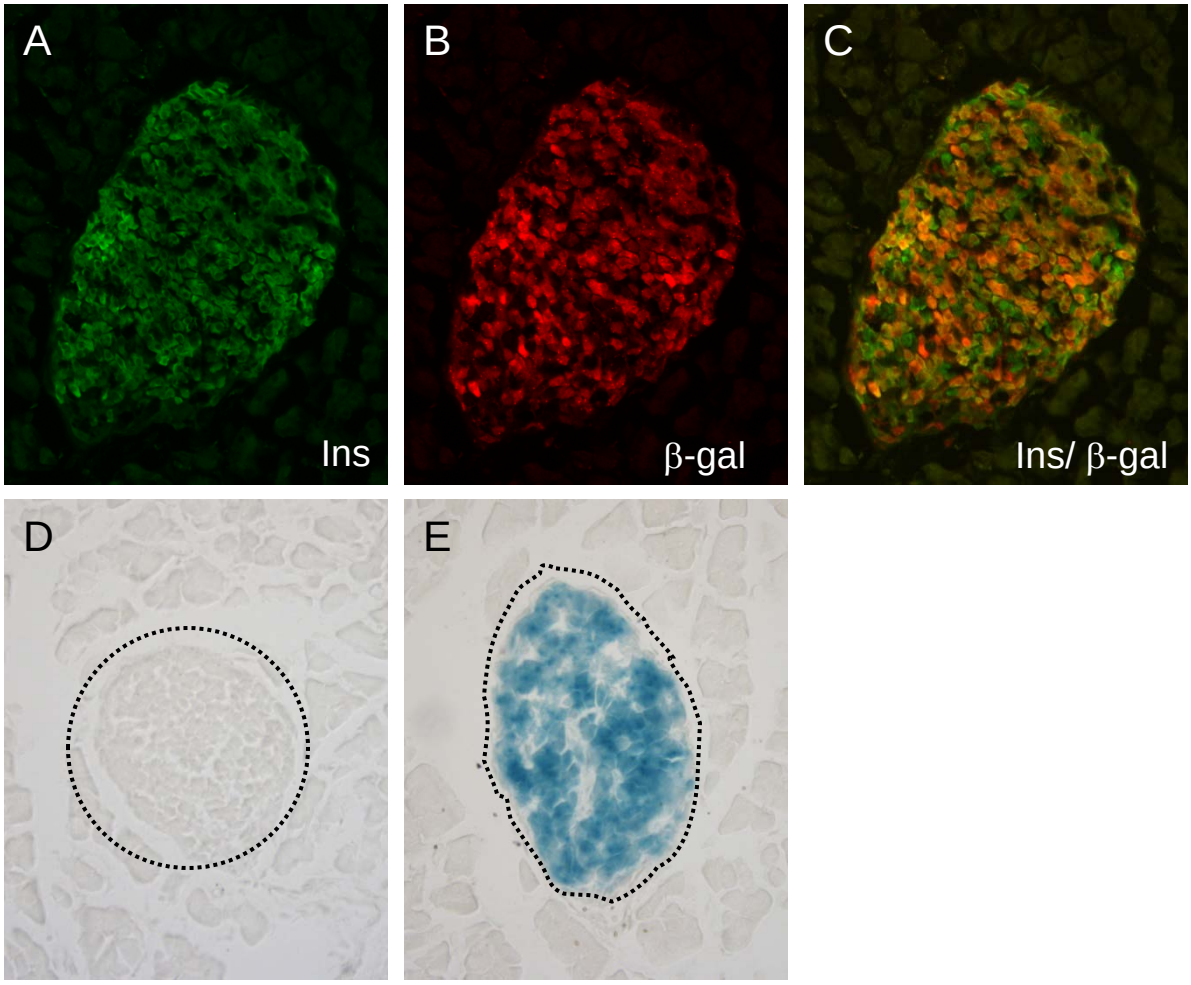

Figure 7. Characterization of Pdx1^{PB} Cre ^{ER};R26R mice were analyzed using immunohistochemistry and X-gal staining. Pancreatic sections from Pdx1^{PB} Cre ^{ER};R26R were stained with insulin (A) and β-gal (B), co-expression (C) was used to determine the percent of recombination occurring in the islet after tamoxifen. X-gal staining was done on cryosections from bigenic mice that had either (D) treated with corn oil, or (E) given 3 injections of 8mg of tamoxifen. Little to no X-gal or β-gal staining was observed in Pdx1^{PB} Cre ^{ER};R26R mice that had not been treated with tamoxifen.

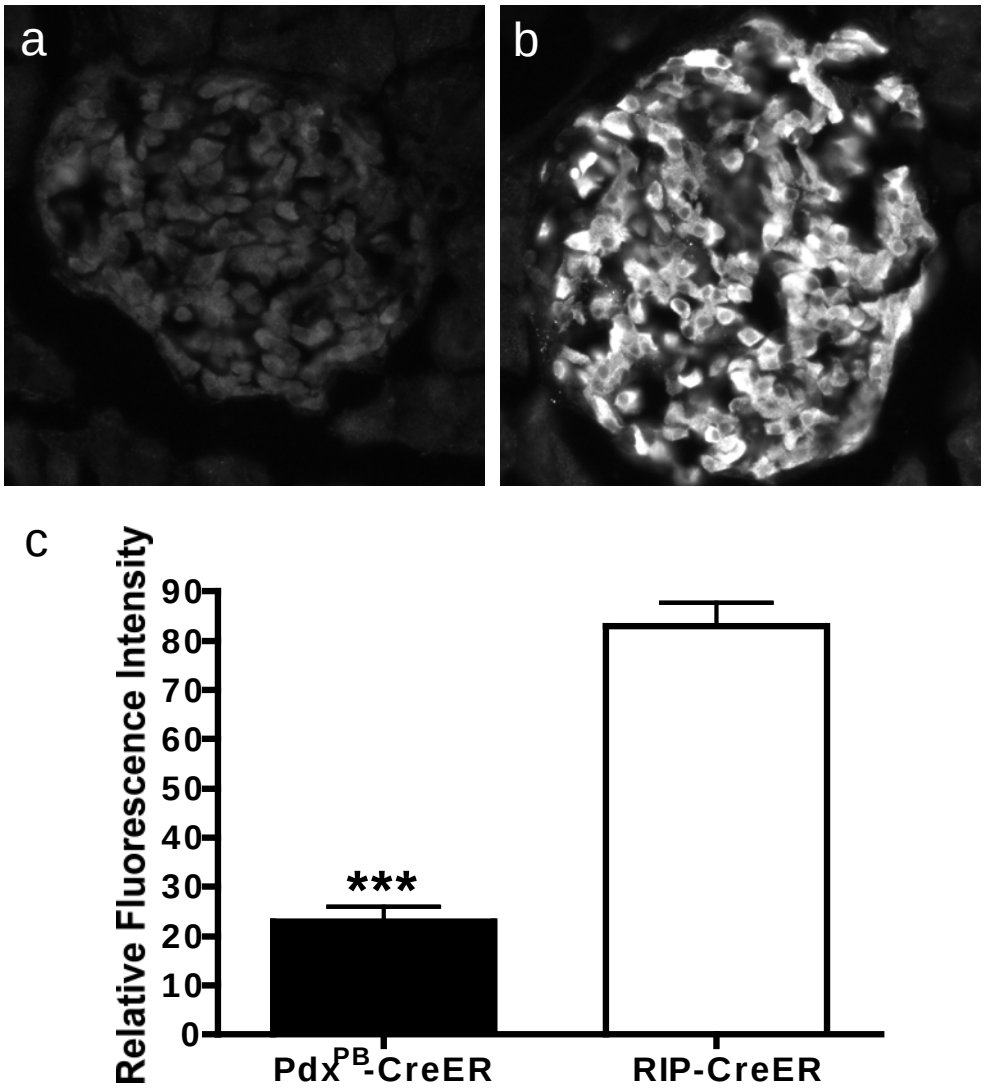

Figure 8. Comparison of Cre expression in Pdx1^{PB}-Cre^{ER};R26R and RIP-Cre^{ER};R26R mice. Immunofluorescence staining for Cre was preformed on pancreatic cryosections from adult mice, not treated with tamoxifen. (a) Pdx1^{PB}Cre^{ER};R26R and (b) RIP-Cre^{ER};R26R. (c) The relative fluorescence intensity of islets (mean pixel intensity of each islet - background) from mice from each line (n=4) were analyzed by NIH IMAGEJ. Pdx1^{PB}Cre^{ER};R26R (n=24 islets) and RIP-Cre^{ER};R26R (n=40 islets). Immunofluorescence, microscopy, and image acquisition was performed under identical conditions on sections from Pdx1^{PB}-Cre^{ER}; R26R and RIP-Cre^{ER};R26R mice. *** p-value<0.0001 by t-test