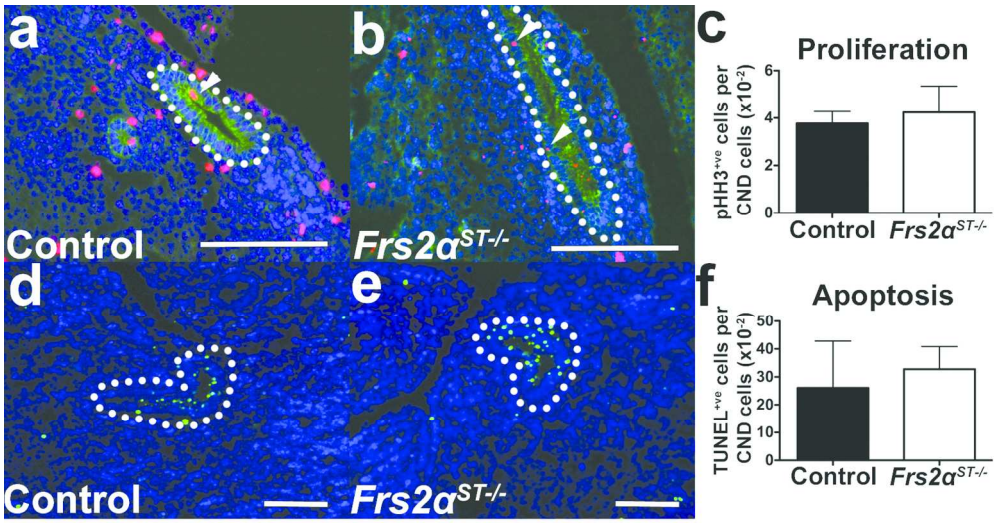
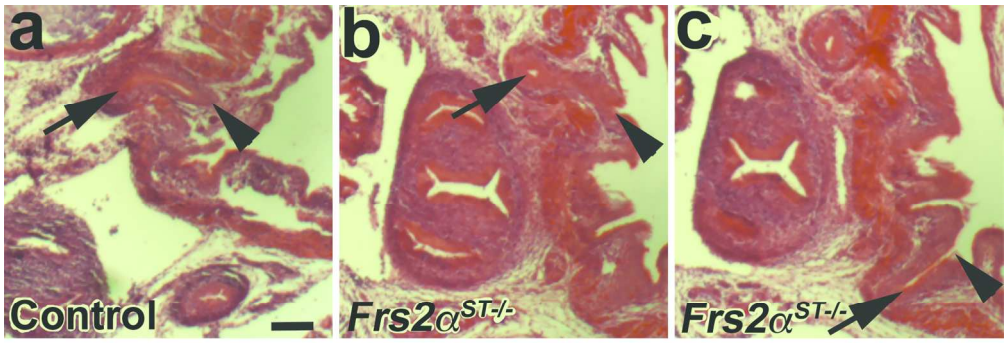


Supplemental Figure S1 – CND proliferation and apoptosis are unchanged in E11.5 *Frs2α*$^{ST-/-}$ embryos.

(a-b) Immunofluorescent labeling reveals comparable numbers of phospho-histone H3 positive proliferating cells (red; arrowheads) within E-Cadherin-labeled common nephric ducts (green, dotted lines) in a control (a) and *Frs2α*$^{ST-/-}$ (b) embryo. (c) Graph confirms comparable mean levels of proliferating cells/100 CND cells in both genotypes. (d-e) Numbers of TUNEL positive cells (green) within CNDs (dotted lines) of the control (d) and *Frs2α*$^{ST-/-}$ embryo (e) appear similar. (f) Graph confirms comparable mean numbers of apoptotic cells/100 CND cells in control and mutant. Nuclei = blue. (n) = 3 per genotype. Values = Mean + SD. Student's Test analysis used. Scale bar = 200μm.

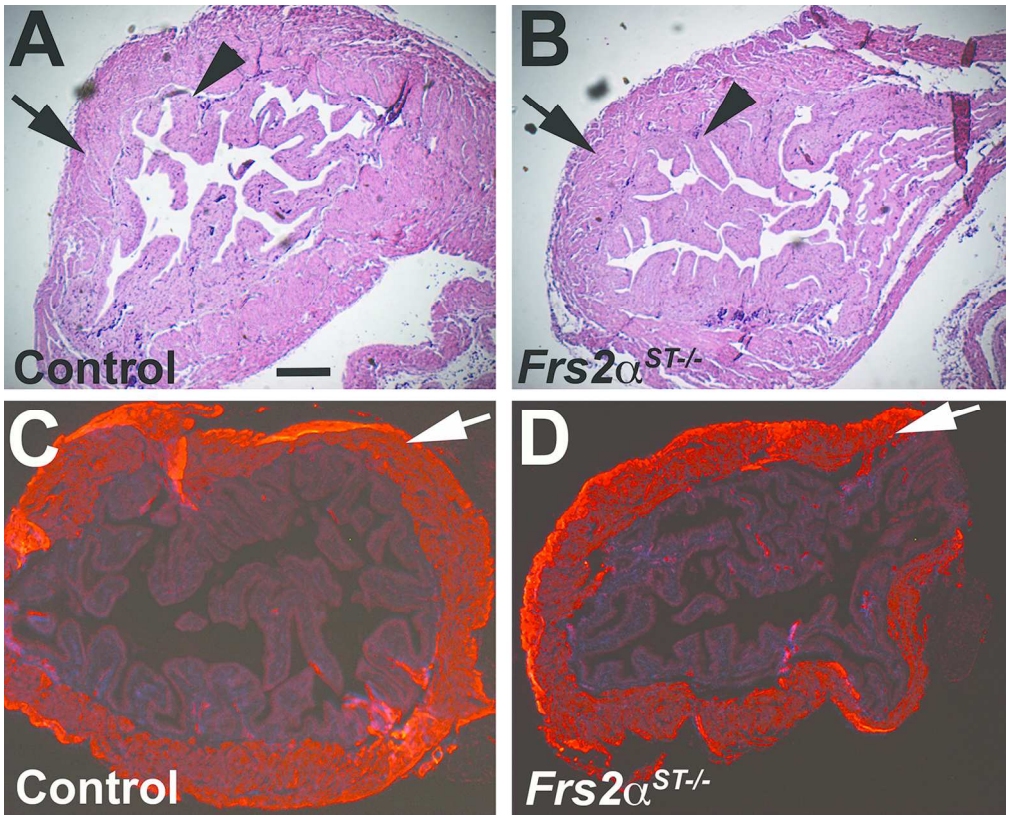
145x165mm (300 x 300 DPI)



Supplemental Figure S2 – H&E sections of P1 *Frs2α*$^{ST-/-}$ refluxing ureters appear to insert in a straight line as opposed to non-refluxing mutant and control ureters that are curvilinear.

Representative H&E stained images from P1 control (a) and non-refluxing ureters (b) show a curvilinear intravesicular shape from the outside of the bladder (arrow) to the lumenal insertion (arrowhead). Similar images from a refluxing mutant (c) show a more straight linear intravesicular shape from the outside (arrow) to the lumenal insertion (arrowhead). Scale bar = 100μm.

152x120mm (300 x 300 DPI)



137x111mm (300 x 300 DPI)