

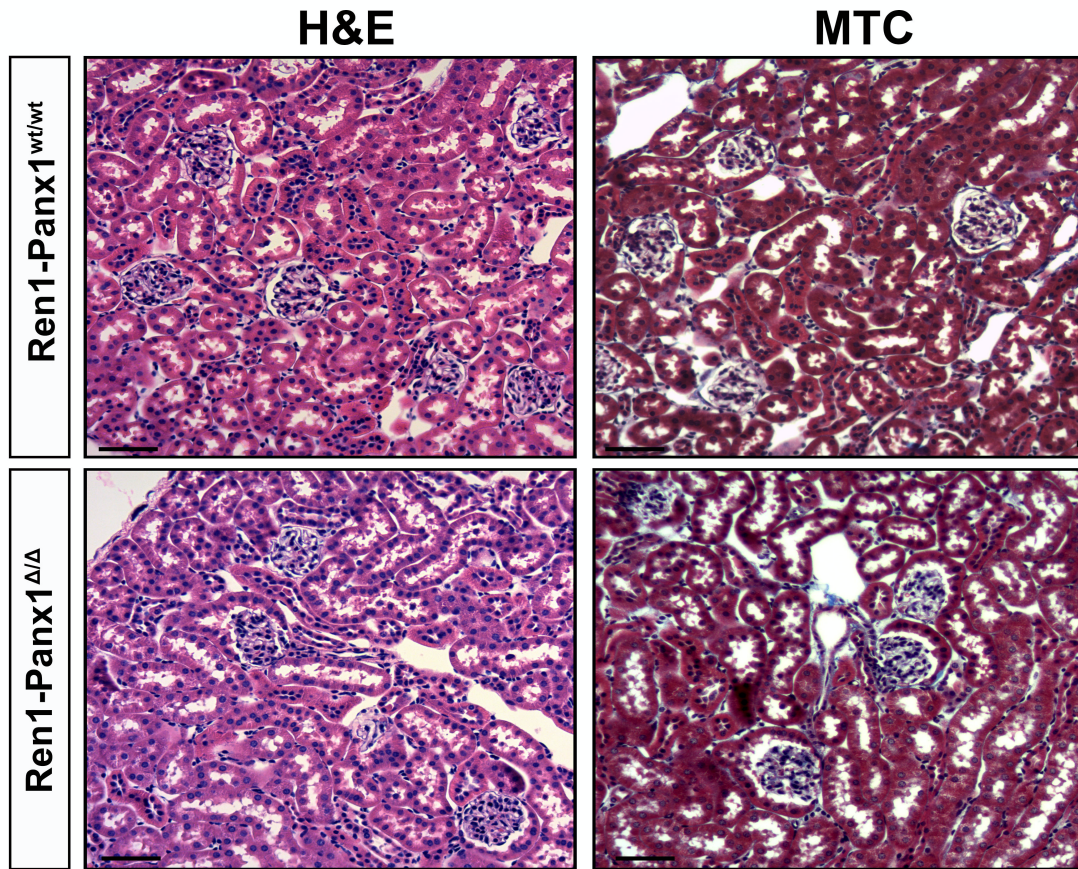
SUPPLEMENTAL MATERIAL FOR:

PANNEXIN 1 CHANNELS IN RENIN-EXPRESSING CELLS INFLUENCE RENIN SECRETION AND BLOOD PRESSURE HOMEOSTASIS

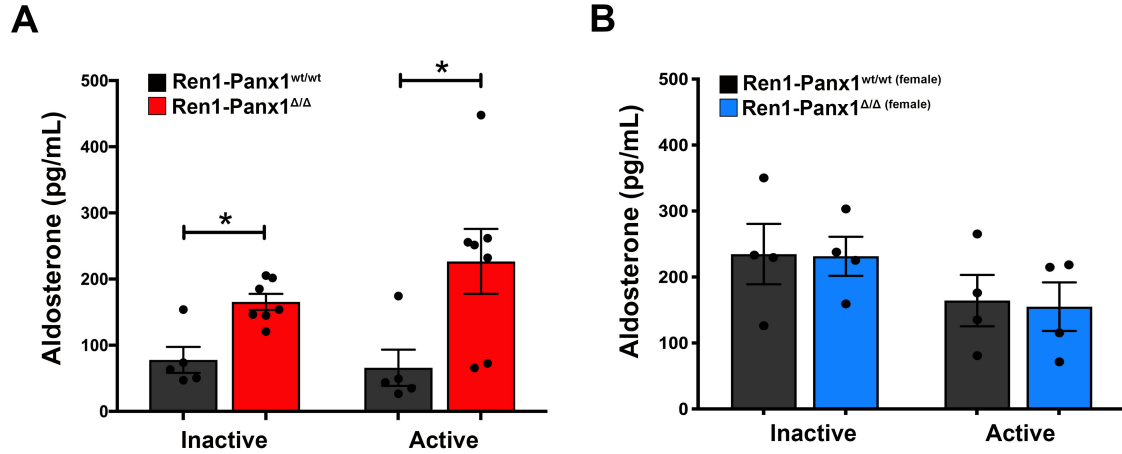
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Affiliations

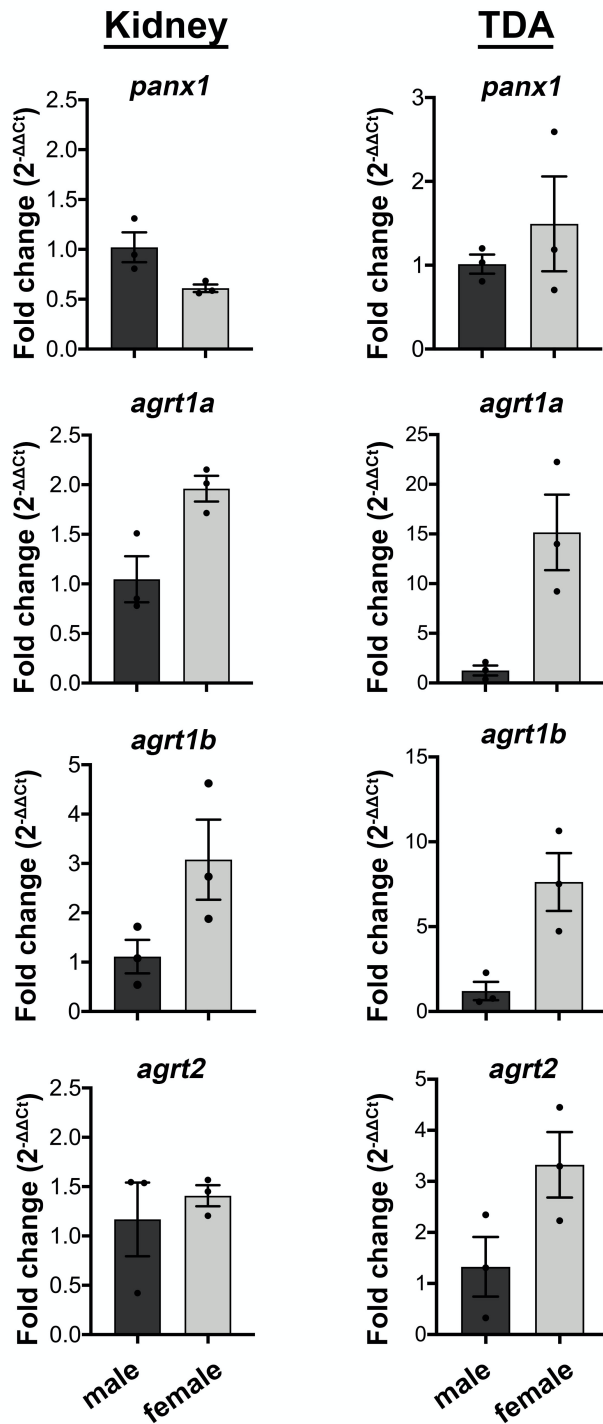
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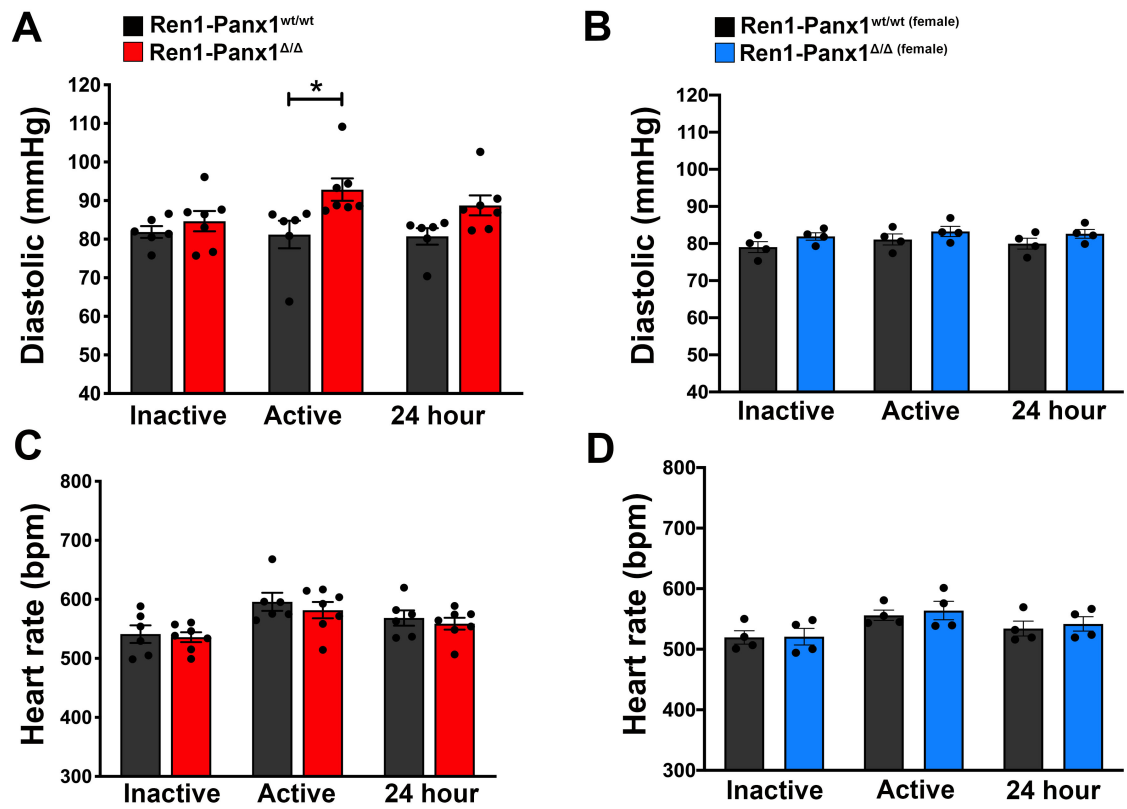
Supplemental Figure 1: Ren1-Panx1^{Δ/Δ} mice have normal renal tissue morphology. Representative hematoxylin-eosin (H&E) and Masson's Trichrome (MTC) stain of kidney tissue. Glomerular size, distribution, and morphology are normal in Panx1 knockouts. No fibrosis or collagen deposition detected in the renal interstitium. Scale bar; 100 μ m.



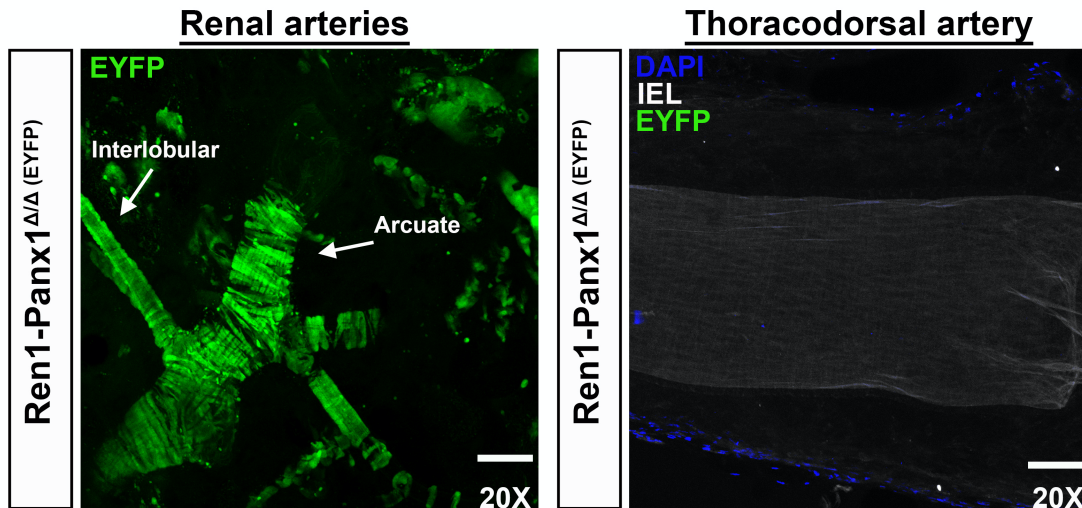
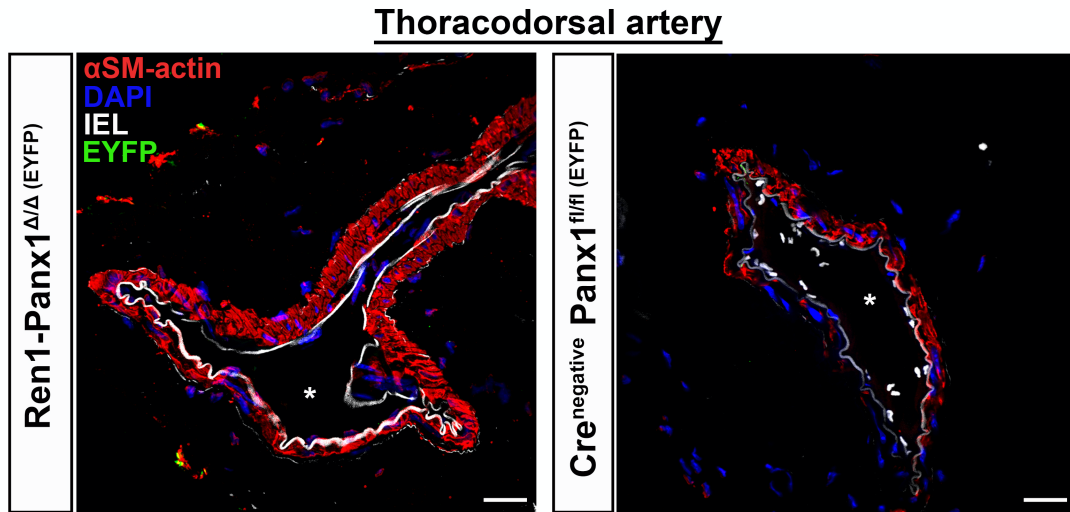
Supplemental Figure 2: Plasma aldosterone levels are enhanced in male Ren1-Panx1 knockout mice. Plasma aldosterone levels measured using RIA during the inactive and active period in **(A)** male Ren1-Panx1^{wt/wt} control (N=5) and Ren1-Panx1^{Δ/Δ} mice (N=7) and **(B)** female Ren1-Panx1^{wt/wt} control (N=4) and Ren1-Panx1^{Δ/Δ} mice (N=4). Data presented as mean ± s.e.m. Two-way ANOVA with repeated measures and Bonferroni post-hoc test performed for significance; *p<0.05.



Supplemental Figure 3: Male and female expression analysis of Panx1 and angiotensin-II receptors. Expression analysis ($2^{-\Delta\Delta C_t}$) of kidney cortex and thoracodorsal arteries (TDA) from male (n=3) and female (n=3) C57Bl6 mice. Data presented as mean fold change \pm s.e.m.

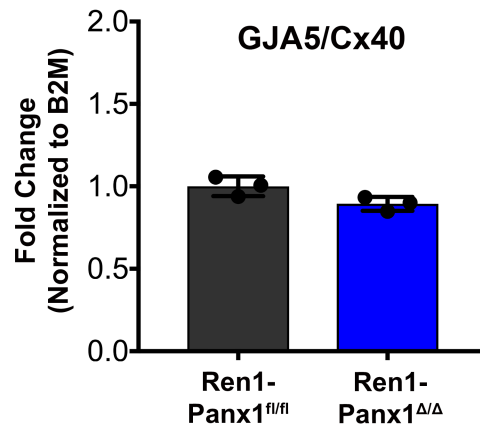


Supplemental Figure 4: Diastolic blood pressure and heart rate from male and female Ren1-Panx1 knockout mice compared to controls. (A) Male diastolic pressure (B) Female diastolic pressure (C) Male heart rate (D) Female heart rate from Ren1-Panx1^{wt/wt} control (male: N=6, female: N=4) and Ren1-Panx1^{Δ/Δ} mice (male: N=7, female: N=4). Data are presented as mean ± s.e.m. Two-way ANOVA with repeated measures and Bonferroni post-hoc test performed for significance; *p<0.05.

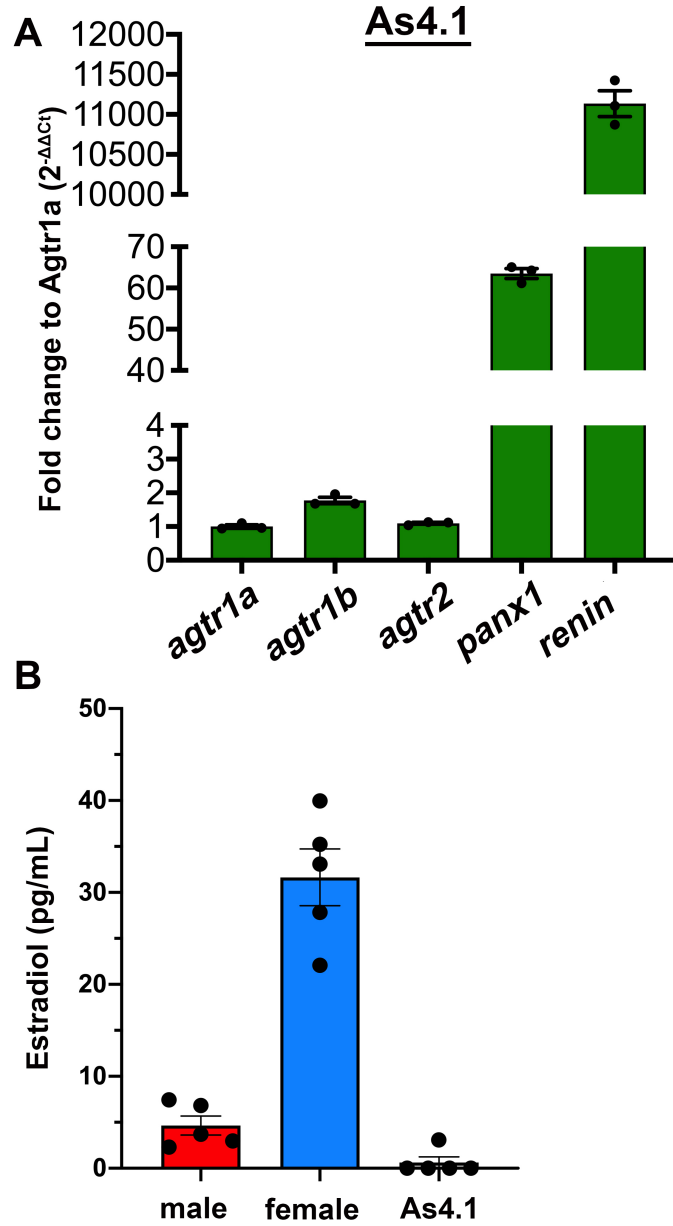
A**B**

Supplemental Figure 5: $Ren1^d$ -Cre is active in reno-vascular smooth muscle cells and not peripheral vascular smooth muscle cells. (A) Whole mount confocal images from $Ren1-Panx1^{\Delta/\Delta}$ kidney slices and thoracodorsal arteries expressing the R26R-EYFP $Gt(ROSA)26Sor^{tm1(EYFP)Cos}$ gene locus, EYFP (green), internal elastic lamina: IEL (white), DAPI (blue). (B) Immunofluorescence staining and confocal images of thoracodorsal arteries from EYFP expressing $Ren1-Panx1^{\Delta/\Delta}$ mice or $Ren1^d$ -Cre negative controls. EYFP (green), alpha smooth muscle acting (red), DAPI (blue), IEL (white); scale bar=20 μ m in each image. Asterisk* denotes artery lumen.

A



Supplemental Figure 6: Loss of Panx1 does not alter Cx40 transcription. (A) Cx40 mRNA expression fold change from kidney cortex of Ren1-Panx1^{wt/wt} and Ren1-Panx1^{Δ/Δ} mice; n=3. Data presented as mean fold change ± SD.



Supplemental Figure 7: As4.1 expression analysis and estradiol levels. (A) Expression analysis ($2^{-\Delta\Delta C_t}$) of As4.1 for angiotensin-II receptor isoforms, Pannexin 1, and renin (n=3 experiments). Data presented as mean fold change \pm s.e.m from *agtr1a* levels. **(B)** Estradiol measured from As4.1 cells in comparison to male and female wild type mice (n=5 mice; n=5 experiments). Data presented as mean \pm s.e.m.