

## SUPPLEMENTAL MATERIAL

### SUPPLEMENTAL FIGURE LEGENDS

#### **Supplementary Figure 1. Validation of FHH.*Add3* transgenic and knockout (KO) rats.**

Representative images of Western blot indicating that ADD3 (94 kDa) is expressed in the kidney of FHH.*Add3* transgenic (A), SD (B), FHH.1<sup>BN</sup> congenic (C) rats that carry the reference K572 allele, but was barely detectable in FHH (A) and *Add3* KO rats (C). Beta-Actin was used as a loading control.

#### **Supplementary Figure 2. The vascular effects of the ADD3-K572Q variant are autosomal recessive.**

The middle cerebral arteries (MCA) constricted in response to the elevation of perfusion pressure in Sprague Dawley (SD) and SD.*Add3* KO heterozygous (Het) rats carrying two and one of the ADD3 WT K572 alleles, respectively, but failed to constrict in SD.*Add3* KO homozygous (Hom) rats. Data are presented as mean values  $\pm$  SE. A two-way analysis of variance for repeated measures was used for statistical analysis, followed by a Holm-Sidak test.  $P < 0.05$  was considered statistically significant. \* indicates significant differences compared with the corresponding values in SD and Het SD.*Add3* KO rats.

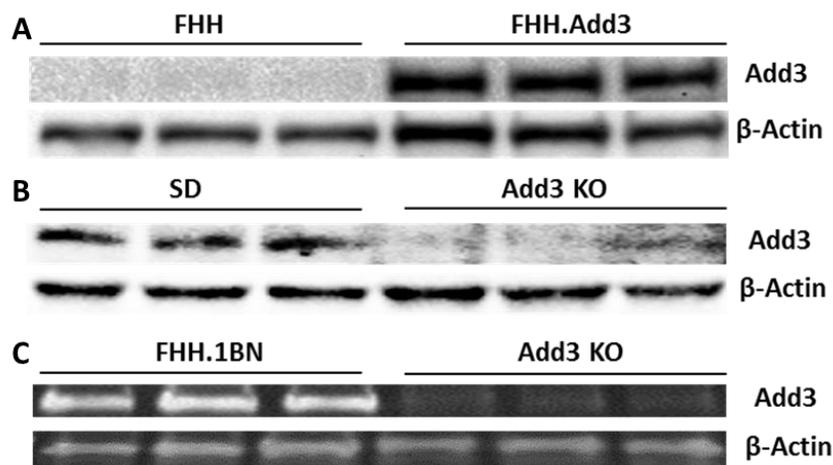
#### **Supplementary Figure 3. Comparison of the expression of glomerular nephrin staining, glomerular injury scores, renal interstitial fibrosis, and protein casts in hypertensive FHH and FHH.*Add3* transgenic rats.**

(A) Mean fluorescence intensities for nephrin staining per glomerulus was higher in

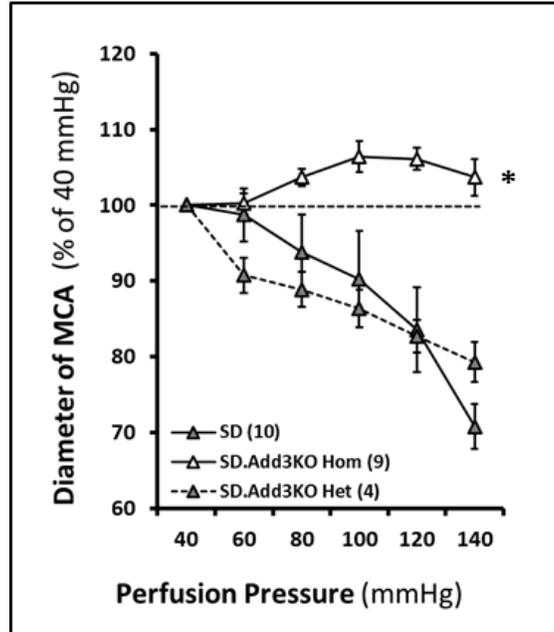
DOCA-salt hypertensive FHH than FHH.*Add3* transgenic rats. (B) The glomerular injury score was reduced in DOCA-salt hypertensive FHH.*Add3* transgenic versus FHH rats. (C) Renal interstitial fibrosis was reduced in DOCA-salt hypertensive FHH.*Add3* transgenic versus FHH rats. (D) Protein cast formation was attenuated in DOCA-salt hypertensive FHH.*Add3* transgenic versus FHH rats. Data are presented as mean values  $\pm$  SE. The significance of differences in mean values was determined using an unpaired t-test. \* indicates a significant difference ( $P < 0.05$ ) compared with the corresponding value in the control strain. Numbers in parentheses indicate the number of animals/glomeruli or areas studied.

## SUPPLEMENTAL FIGURES

### Supplemental Figure 1



Supplemental Figure 2



Supplemental Figure 3

