

Supplementary Table 1: Normal Mendelian distribution of pups born from breeding $Mtor^{wt/del}$ Podocin-Cre mice to $Mtor^{flox/flox}$ mice.

Supplementary Figure 1: Mtor protein is reduced in glomeruli from Mtor haploinsufficient mice ($Mtor^{wt/del}$)

Supplementary Figure 2: Molecular markers of podocyte differentiation.

- A. Immunostaining for podocin shows similar levels at 2 weeks of age in mutants and controls, but downregulation at 3 weeks of age in mutants, although staining pattern is similar.
- B. At 3 weeks of age, Wilms tumor protein 1 (*Wt1*) and *Nphs1* are not different between mutants and control mice.
- C. Vascular endothelial growth factor A (*Vegfa*) expression in glomeruli. In situ analysis shows that *Vegfa* expression in podocytes is similar in mutants and controls at 2 weeks of age but is downregulated in mutants at 3 weeks of age.

Supplementary Movie:

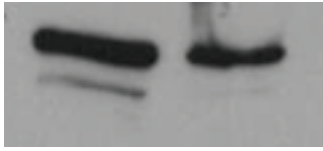
Human podocyte transfected with LC3-GFP shows accumulation of ringed structures characteristic of autophagosomes upon exposure to rapamycin.

Supplementary table 1: Normal mendelian distribution of pups born from breeding $Mtor^{wt/del}$ Podocin-Cre mice to $Mtor^{flax/flax}$ mice.

Genotype	No. of pups	Observed (%)	Expected (%)
$Mtor^{flax/del}$ Podocin-Cre	49	22	25
$Mtor^{flax/wt}$ Podocin-Cre	40	27	25
Podocin-Cre Negative	91	51	50

mTOR flox/wt
mTOR flox/del

mTOR



b-actin

