Figure 2

(a) Body weight (g)

(b) Kidney weight (g)

(c) Kidney/body weight ratio

(d) Blood glucose (mg/dl)

(e) Urine volume (ml/day)

(f) Urine albumin (mg/gCr)

(g) Homocysteine (μmol/l)

(h) PC/PE ratio
Figure 3

**Figure Legend:**

- **a-d:** Images showing different conditions (Pemt+/+ (CON) vs. Pemt+-/ (CON) vs. Pemt+/+ (STZ) vs. Pemt/- (STZ)) with scale bars.
- **e-h:** Images of Type IV collagen expression under different conditions.
- **i-l:** Images of TGF-β expression under different conditions.
- **m-o:** Graphs showing the average glomerular area, mesangial matrix index, and Type IV collagen positive area/glomerular area under different conditions.
Figure 4

(a) Pemt+/- (STZ) (b) Pemt-/- (STZ) (c) Pemt+/- (CON) (d) Pemt-/- (CON)

(e) Fibrosis area (%)

- Fibrosis area of Pemt+/- (CON) is significantly lower than that of Pemt-/-(CON).
- Fibrosis area of Pemt+/- (STZ) is significantly higher than that of Pemt-/-(CON).

**##** indicates a significant difference at p < 0.01.
Figure 5
Figure 6

- Full length 90 kDa
- Cleaved 50 kDa

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Figure 7

(a, b) Histological images of Pemt+/- and Pemt-/- mice treated with STZ. (c) Bar graph showing cells per cortex area (10 mm²) in different groups. (d) Western blots showing cleaved caspase 3 and 7 in Pemt+/- and Pemt-/- mice with and without STZ. (e, f) Quantification of cleaved caspase 3 and 7 normalized to GAPDH.