

## **SIGNIFICANCE STATEMENT**

AKI can lead to CKD. Mitochondrial dysfunction in the proximal tubule epithelium has emerged as an important factor in this progression. Mitochondria are dynamic organelles, and their shape is closely linked to function. This study provides evidence that proximal tubule deletion of Drp1, a mediator of mitochondrial fission, prevents AKI and may have therapeutic value as a target after injury to prevent progressive fibrosis.