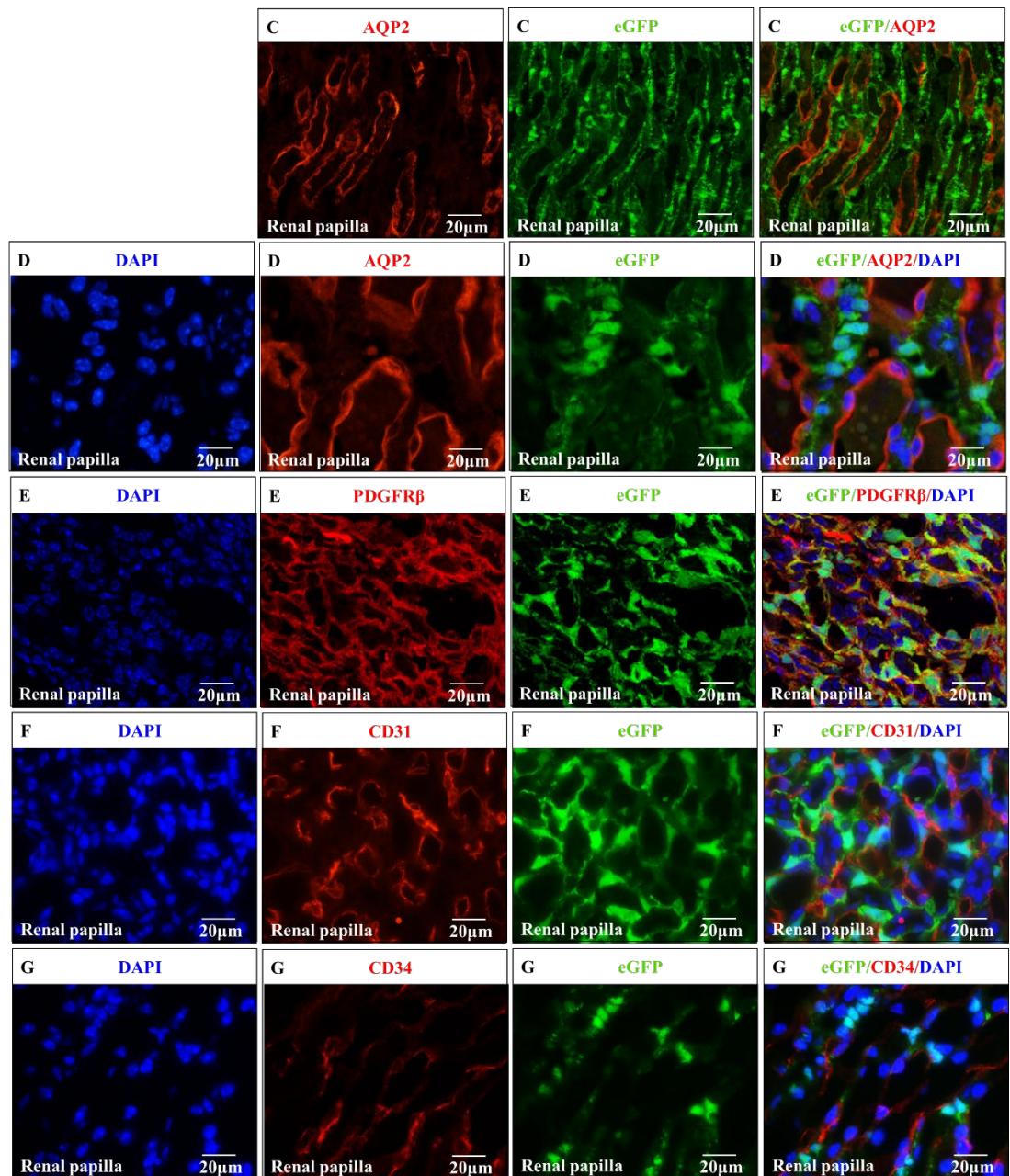
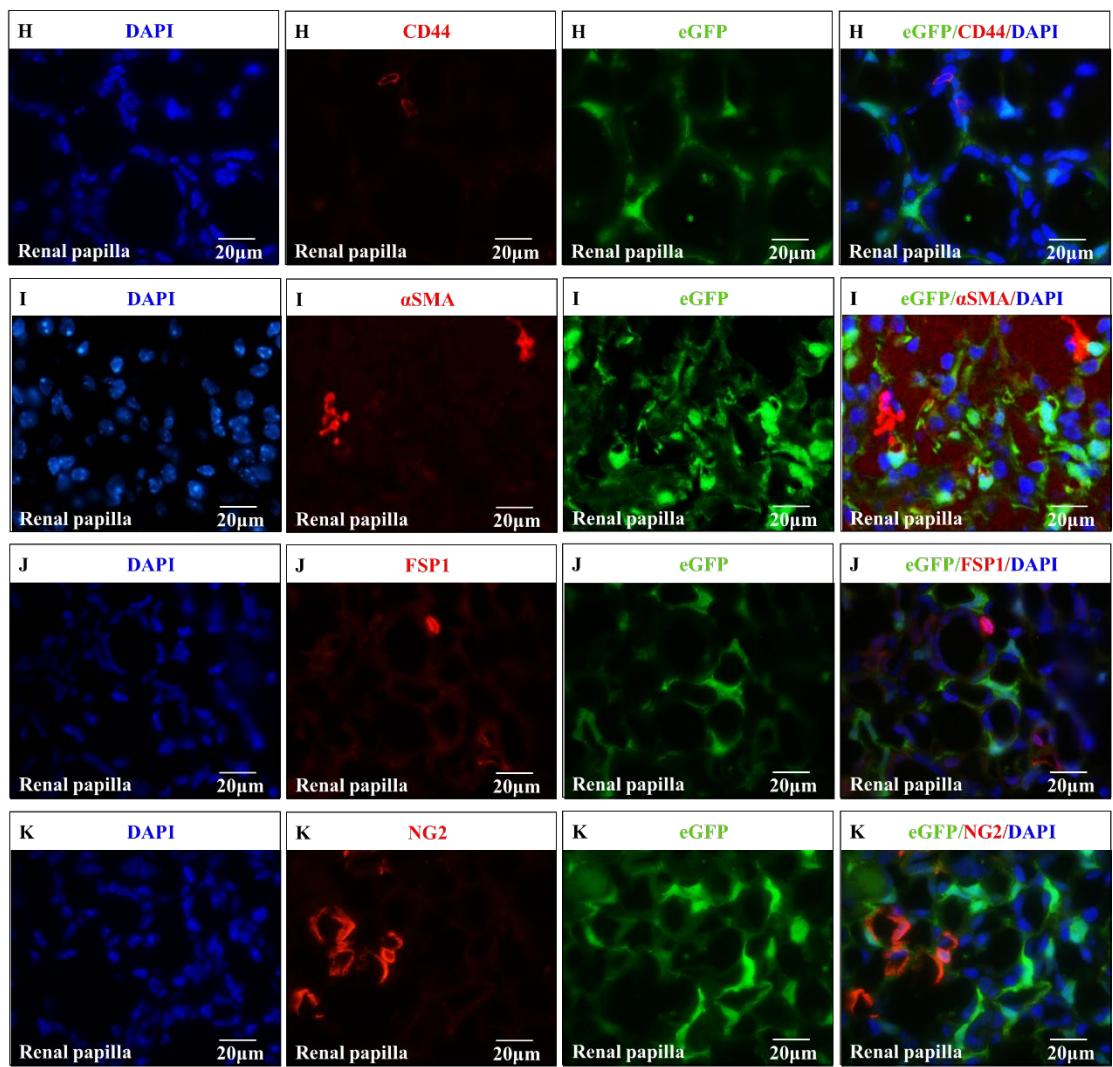


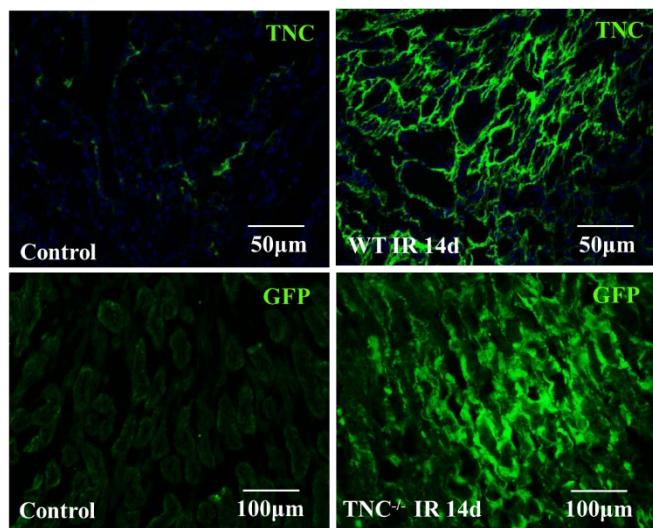
Supplement Figure 1. TNC expression in non-fibrosis renal kidney. IHC staining of TNC in kidneys which were resected because of renal carcinoma showed that TNC was rarely detected in the cortex, but rich in the medullary interstitium (A&B, n=6, 4 sections for each). Quantitative PCR showed that TNC mRNA was significantly higher in medulla than in cortex (C, n=6, p<0.01).



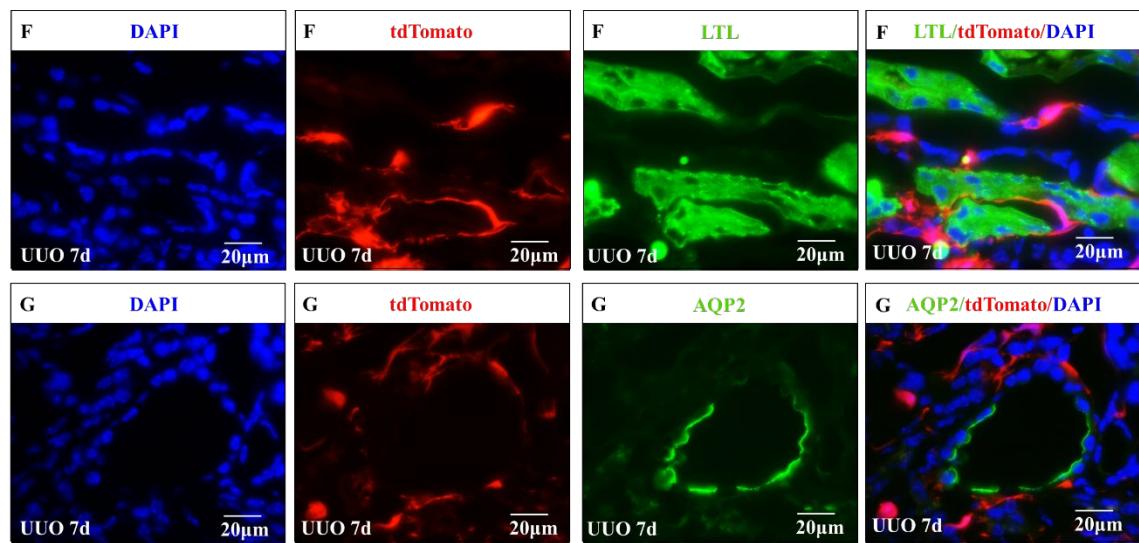
Supplement Figure 2. Separation of three colors for Figure 2.



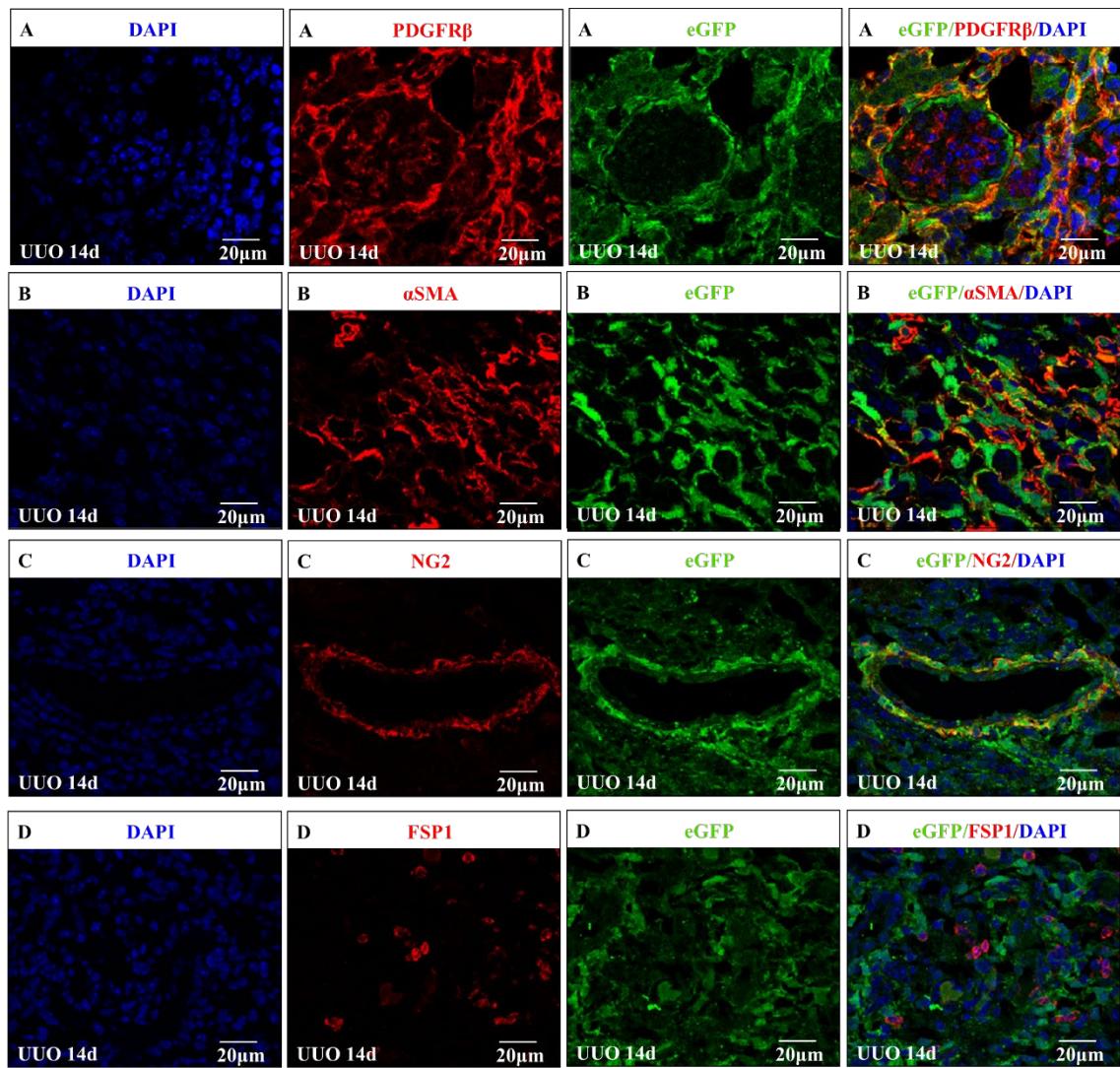
Supplement Figure 2. Separation of three colors for Figure 2.



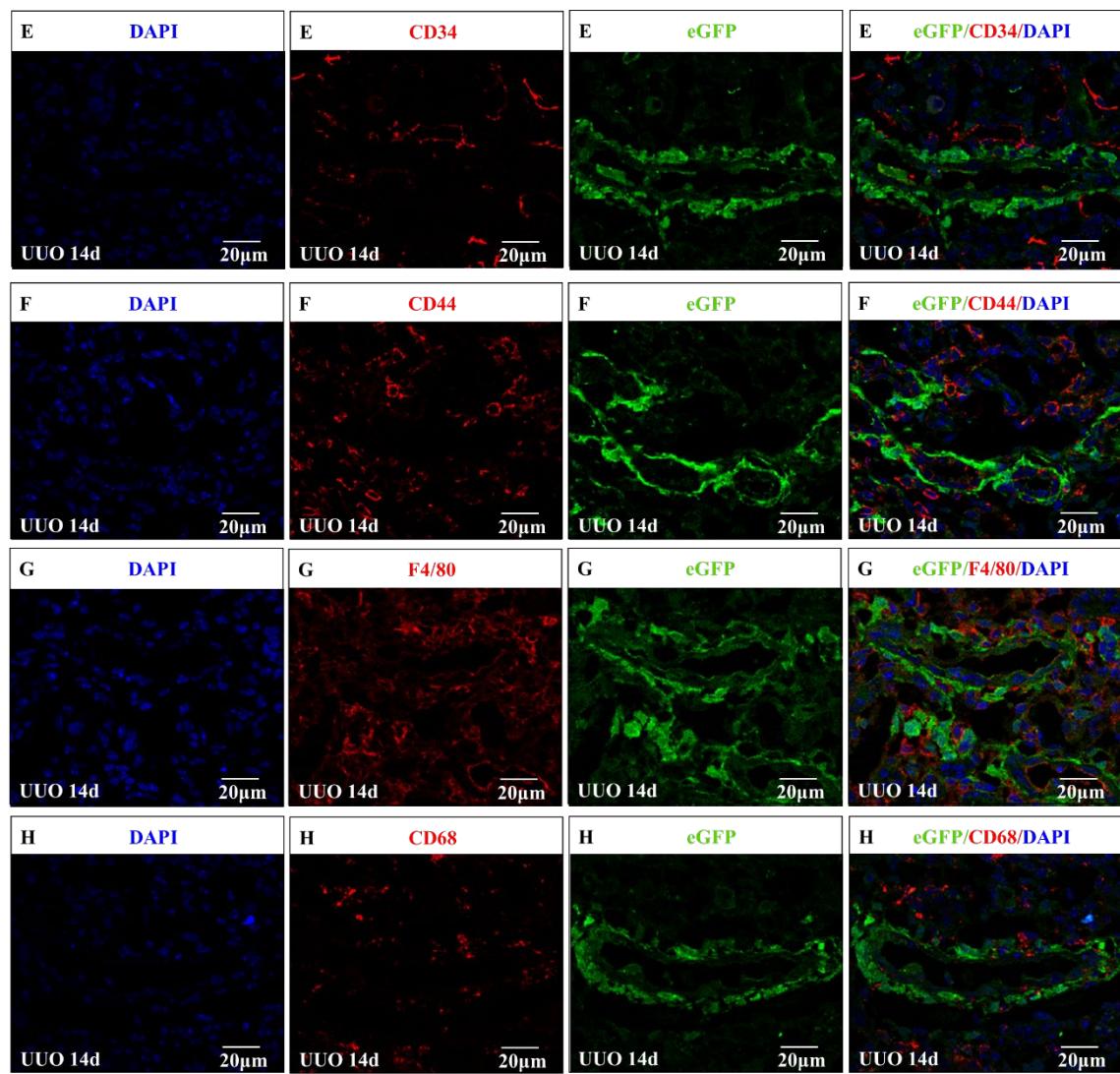
Supplement Figure 3. TNC was significantly increased in the IR induced fibrosis kidney. IF showed that TNC in the renal cortex of wild-type mice and TNC reporter eGFP in the renal cortex of transgenic mice $TNC^{CreER2-eGFP/+}$ were both significantly increased at the 14th day after IR injury.



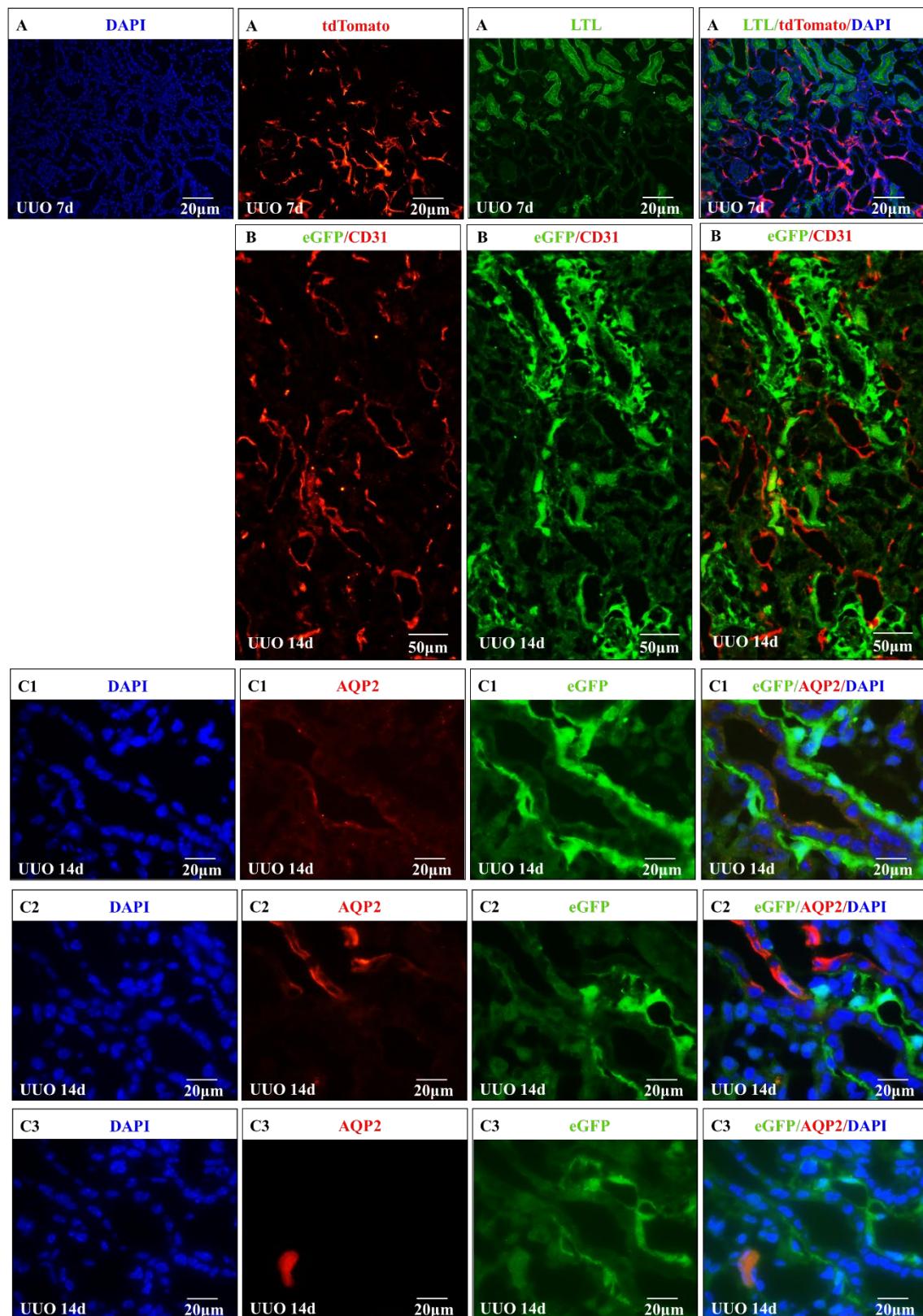
Supplement Figure 4. Separation of three colors for Figure 5.



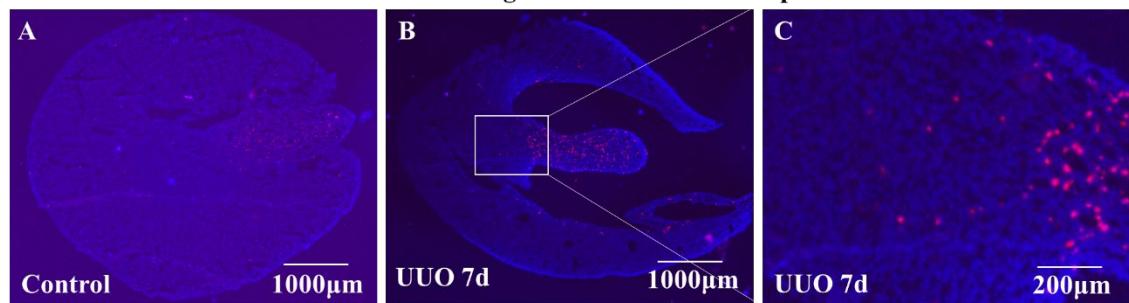
Supplement Figure 5. Separation of three colors for Figure 6.



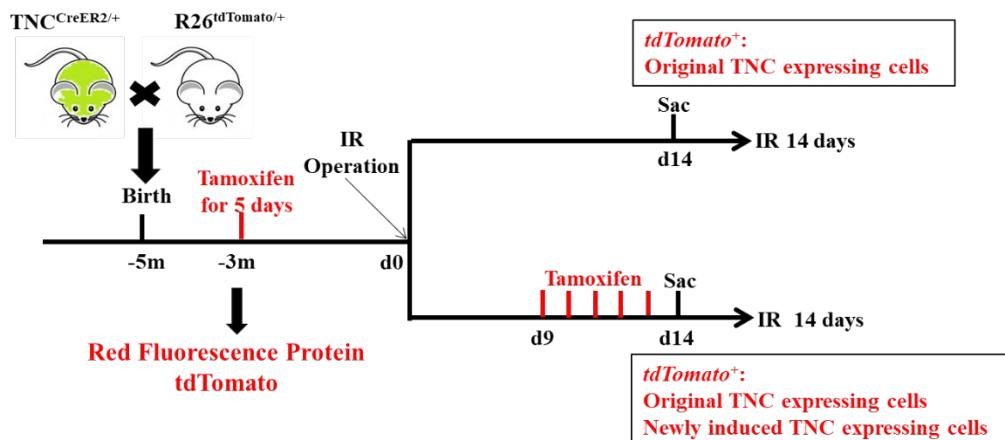
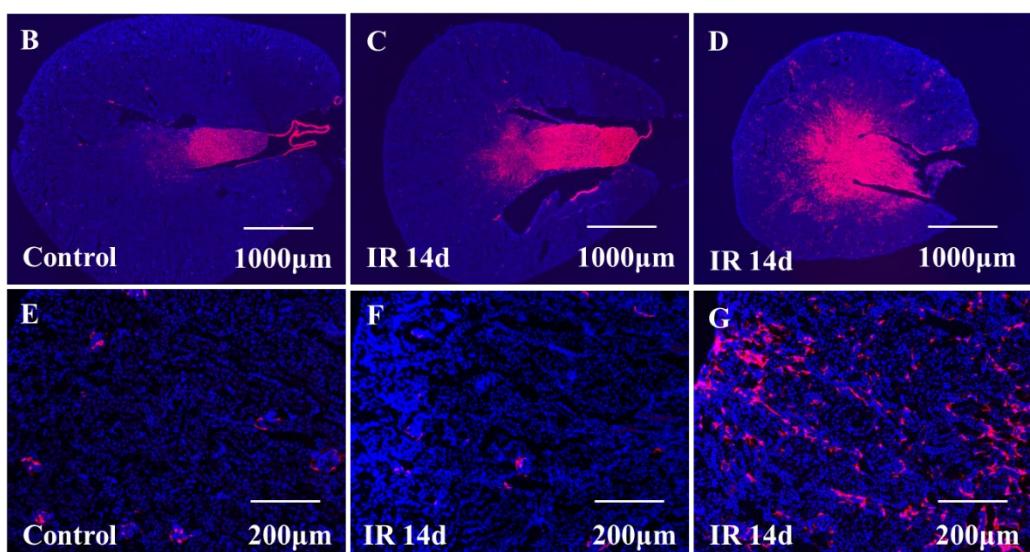
Supplement Figure 5. Separation of three colors for Figure 6.



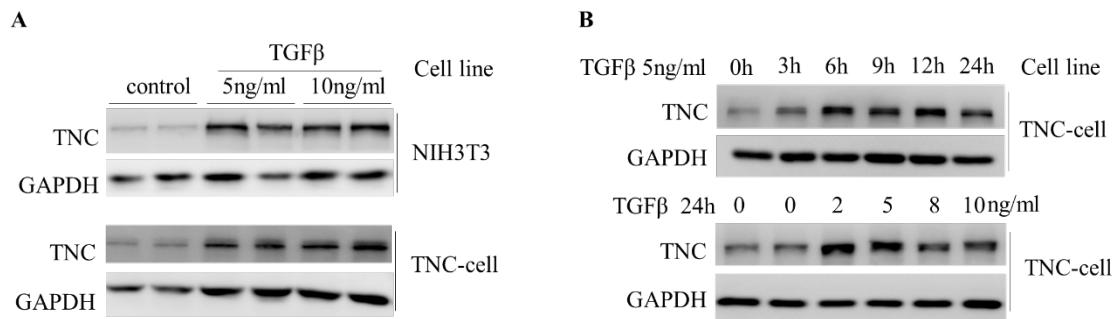
Tamoxifen was not given before and after operation



Supplement Figure 7. Little leakage in bi-transgenic mice $TNC^{GCE/+};R26^{tdTomato/+}$. In the mice without tamoxifen exposure, there were only a few tdTomato positive cells in normal or fibrotic kidneys, suggesting that the reporter mice had little leakage and could be used for lineage tracing analysis.

A**Tamo-before-IR****Tamo-after-IR**

Supplement Figure 8. Cell lineage study in IR induced renal fibrosis model. The bi-transgenic mice $TNC^{CreER2-eGFP/+}$; $R26^{tdTomato/+}$ were treated with tamoxifen (1.5mg/d for 5 days) at 8 weeks old and subjected to kidney ischemia-reperfusion (IR) operation after 12 weeks' washout (A). Fourteen days later, the tdTomato positive cells were limited to the renal medulla, although they were significantly increased (B&C). However, if a second series of tamoxifen was given from day 9 to day 13 after IR operation, the tdTomato positive cells were found throughout the kidney (D). These results suggested that following IR, the original TNC expressing cells in the renal medulla proliferated, but they were not progenitors of the expanded TNC expressing cells in the cortex.



Supplement Figure 9. TNC was induced by TGF β . The expression of TNC was induced by TGF β in cultured TNC-Cell and NIH3T3 lines, peaking at the 6th hour after TGF β treatment (A&B).