**Supplementary information**

**A Biomimetic Double Network Hydrogel**

**Ameliorates Renal Fibrosis and Promotes Renal Regeneration**

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Figure S1. (A) Physical picture of different hydrogels. (B) Stress–strain curves and Young’s modulus of different GC groups. (GC-1 to GC-3: GC hydrogel with 0.1 mg/mL, 1 mg/mL, 10 mg/mL curcumin concentration, respectively)

Figure S2. Atomic force microscopy (AFM) images of different hydrogels.
Figure S3. The cellular biocompatibility of the hydrogels with different kinds of renal cells at day 1 and day 3.
Figure S4. *In vivo* evaluation of biocompatibility of different hydrogels by AST, ALT, TP, ALB detection at 4 and 8 weeks respectively after operation.

![Graphs showing AST, ALT, TP, ALB levels at 4 and 8 weeks](image)

Figure S5. *In vivo* evaluation of biocompatibility of different hydrogels by H&E staining of liver, spleen, and heart at 8 weeks after operation.

![H&E staining images](image)