



Supplementary Fig. S1. Immunoblot analysis of markers for cell proliferation and cell cycle control. The expression of PCNA and CDC2 in the injured kidneys that received vehicle or induced mesenchymal stem cell-extracellular vesicles (iMSC-EVs) was analyzed. Single lane represents lysate from single animal. N denotes normal, healthy animals. The expression of each protein was normalized against that of β -actin used in Fig. 3B and then quantified using ImageJ software. $n=4\sim 5$. Data are presented as mean \pm SD. * $p < 0.05$.

Supplementary Table S1. Primer sequences used for quantitative real-time polymerase chain reaction

Gene	Forward (5'>3')	Reverse (5'>3')
Mouse <i>Ngal</i>	GCAGGTGGTACGTTGTGGG	CTCTGTAGCTCATAGATGGTGC
Mouse <i>Tnf-α</i>	GGTGCCTATGTCTCAGCCTCTT	GCCATAGAAGTATGATGAGAGGGAG
Mouse <i>Kim-1</i>	TCCACACATGTACCAACATCAA	GTCACAGTGCCATTCCAGTC
Mouse <i>Timp-1</i>	CGAGACCACCTTATAACCAGCG	ATGACTGGGGTGTAGGCGTA
Mouse <i>Vcam-1</i>	CTGCAAGAGACTTCCATCCAG	AGTGGTATAGACAGGTCTGTTGG
Mouse <i>Icam-1</i>	GAAATGCCACCTTTTGACAGTG	TGGATGCTCTCATCAGGACAG
Mouse <i>GAPDH</i>	TGGCAAAGTGGAGATTGTTGCC	AAGATGGTGATGGGCTTCCCG
Human <i>COL1A1</i>	ATCAACCGGAGGAATTCCTG	CACCAGGACGACCAGGTTTTC
Human <i>SLUG</i>	CGAACTGGACACACATACAGTG	CTGAGGATCTCTGGTTGTGGT
Human <i>FIBRONECTIN</i>	CGGTGGCTGTCAGTCAAAG	AAACCTCGGCTTCTCCATAA
Human α - <i>SMA</i>	AAGCACAGAGCAAAGAGGAAT	ATGTCGTCCCAGTTGGTGAT
Human <i>VIMENTIN</i>	CCCTCACCTGTGAAGTGGAT	TCCAGCAGCTTCTCTAGGT
Human <i>GAPDH</i>	GAGTCAACGGATTTGGTCGT	TTGATTTGGAGGGATCTCG

Supplementary Table S2. Information on the antibodies used for immunohistochemical staining

Target	Primary antibodies	Secondary antibodies and chromogenic kit
NGAL	Rabbit mAb against NGAL; Abcam, ab216462, 1 : 2,000	Mouse and Rabbit Specific HRP/DAB IHC Detection Kit - micro-polymer (ab236466); Abcam
α -SMA	Anti-alpha smooth muscle Actin antibody; Abcam, ab5694, 1 : 500	
Vimentin	Vimentin (E-5); Santa Cruz Biotechnology, sc373717, 1 : 100	
Fibronectin	Anti-Fibronectin antibody; Abcam, ab2413, 1 : 1,000	
Collagen 1	COL1A1 (E8F4L) XP Rabbit mAb; Cell Signaling Technology, #72026, 1 : 300	
CD11c	CD11c (D1V9Y) Rabbit mAb; Cell Signaling Technology, #97585, 1 : 600	
CD206	CD206/MRC1 (E6T5J) XP Rabbit mAb; Cell Signaling Technology, #24595, 1 : 800	
CD45 F4/80	Rabbit pAb against CD45; Abcam, ab10558, 1 μ g/mL Rabbit mAb; Cell Signaling Technology, #70076T, 1 : 250	
Ly6G	Anti-Ly6g antibody (EPR22909-135); Abcam, ab238132, 1 : 600	
TNF- α	Anti-TNF alpha antibody (52B83); Abcam, ab1793, 1 : 50	
Cleaved caspase 3	Cleaved Caspase-3 (Asp175) Antibody; Cell Signaling Technology, 9661, 1 : 400	
CD31	Anti-CD31 antibody (RM1006); Abcam, ab281583, 1 : 4,000	
BAX	Bax Antibody (B-9); Santa Cruz Biotechnology, sc-7480, 1 : 100	

Supplementary Table S3. Information on the antibodies used for immunoblotting

Target	Primary antibodies and dilution ratio	Secondary antibodies
NGAL	Rabbit mAb against NGAL; Abcam, ab216462, 1 : 1,000	Goat anti-Rabbit IgG H&L (HRP), ab6721; Abcam, 1 : 10,000 Rabbit anti-Mouse IgG H&L (HRP), ab6728; Abcam, 1 : 10,000
TNF- α	Mouse mAb against TNF- α ; Abcam, ab1793, 1 : 1,000	Goat anti-Rat IgG H&L (HRP), ab97057; Abcam, 1 : 10,000
α -SMA	Rabbit mAb against α -smooth muscle actin; Cell Signaling Technology, #19245, 1 : 1,000	
COLLAGEN 1A1	Rabbit mAb against Collagen1a1; Cell Signaling Technology, #72026S, 1 : 1,000	
VIMENTIN	Mouse mAb against Vimentin; Santa Cruz Biotechnology, sc-373717, 1 : 1,000	
ICAM-1	Rabbit mAb against ICAM2; Abcam, ab179707, 1 : 1,000	
SMAD2/3	Rabbit mAb against SMAD2/3; Cell Signaling Technology, #8685, 1 : 1,000	
Phospho-SMAD2/3	Rabbit mAb against phospho-SMAD2/3; Cell Signaling Technology, #8828, 1 : 1,000	
RIP3	Rabbit mAb against RIP3; Cell Signaling Technology, #95702, 1 : 1,000	
Phospho-RIP3	Rabbit mAb against phospho-RIP3 (Thr231/Ser232); Cell Signaling Technology, #91702, 1 : 1,000	
FTH1	Rabbit mAb against FTH1; Cell Signaling Technology, #4393, 1 : 1,000	
GPX4	Rabbit pAb against GPX4; Cell Signaling Technology, #52455, 1 : 1,000	
BAX	Rabbit pAb against BAX; Cell Signaling Technology, #2772, 1 : 1,000	
MLKL	Rat mAb against MLKL; Abcam, #243142, 1 : 1,000	
CD45	Rabbit pAb against CD45; Abcam, ab10558, 1 : 1,000	
F4/80	Rabbit mAb against F4/80; Cell Signaling Technology, #70076, 1 : 1,000	
CD11c	Rabbit mAb against CD11c; Cell Signaling Technology, #97585, 1 : 1,000	
CD206	Rabbit mAb against CD206; Cell Signaling Technology, #24595, 1 : 1,000	
PCNA	Rabbit mAb against PCNA; Cell Signaling Technology, #13110, 1 : 1,000	
CDC2	Rabbit mAb against CDC2; Cell Signaling Technology, #77055, 1 : 1,000	
β -ACTIN	Mouse mAb against β -actin; Santa Cruz Biotechnology, sc-47778, 1 : 1,000	