

**Supplementary information for:**

## **Protective effect of glycyrrhizin, a direct HMGB1 inhibitor, on post-contrast acute kidney injury**

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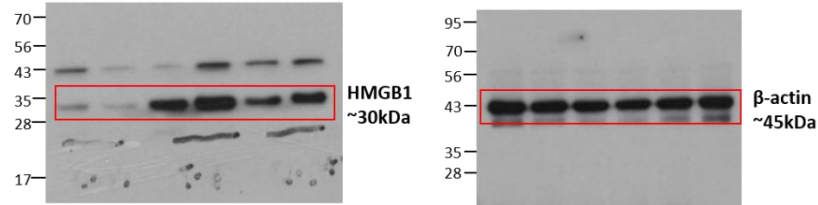
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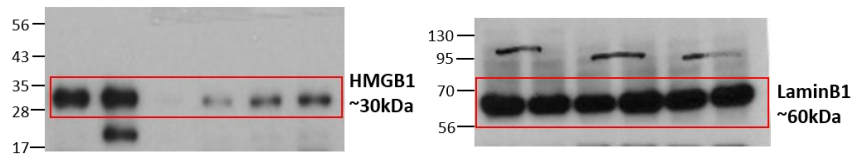
## Supplementary Figure 1. Full- length blots of Figure 2A and Figure 5B

### Figure 2A

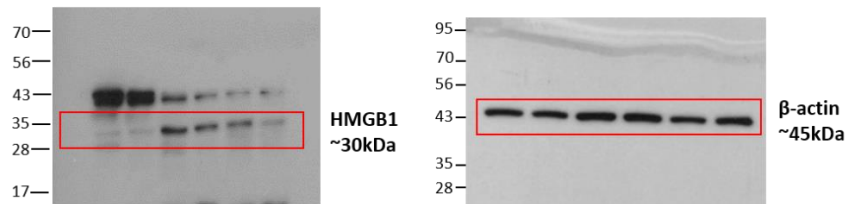
#### A. Total protein HMGB1



#### B. Nucleus HMGB1

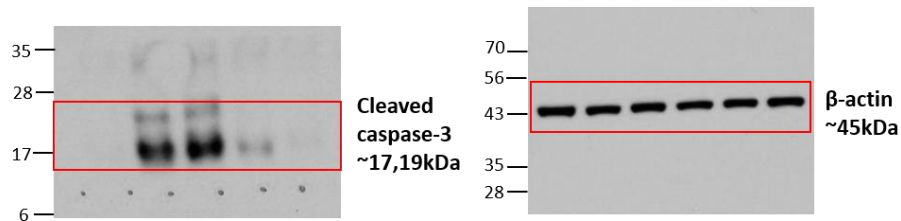


#### C. Cytoplasmic HMGB1



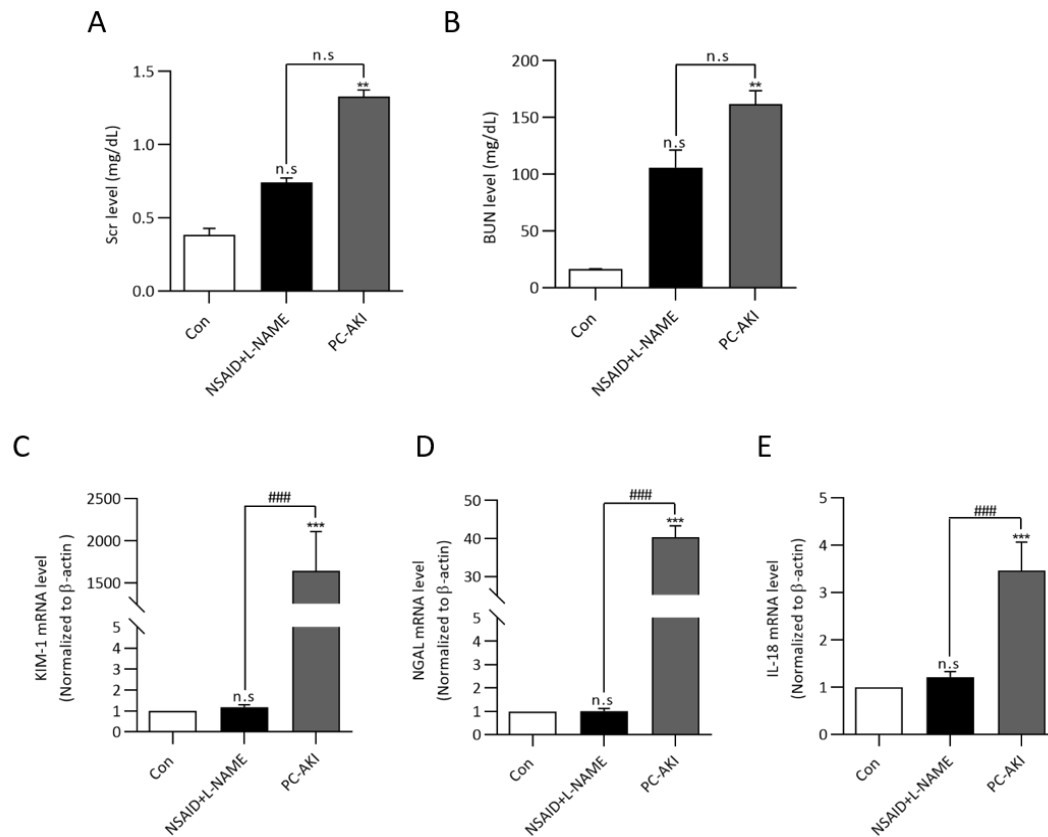
### Figure 5B

#### D. Cleaved caspase-3



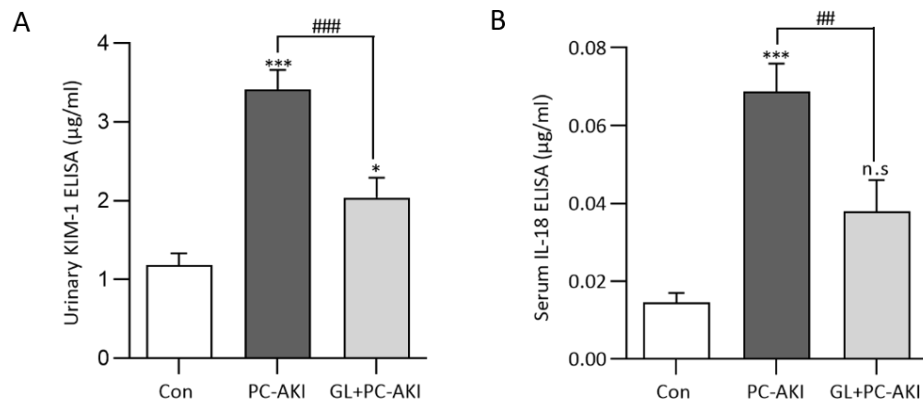
**Supplementary Figure 1.** Full-length blots of Figure 2A and Figure 5B. The blots were loaded with rat kidney tissue and incubated with antibodies against HMGB1,  $\beta$ -actin and LaminB1 to show total protein (A), nucleus (B), cytoplasmic (C) HMGB1. (D) Full-length blots of cleaved caspase-3 and  $\beta$ -actin in Figure 5B. The membrane exposure time was different for each antibody. Dashed lines represent the cropped region shown in Figure 2A and 5B.

## Supplementary Figure 2



**Supplementary Figure 2.** (A-B) Compared to the controls, Scr and BUN significantly increased in the PC-AKI groups, whereas there was no difference between the controls and the NSAID+L-NAME groups. (C-E) Relative expressions of KIM-1, NGAL and IL-18 mRNA were analyzed using RT-PCR. All kidney injury markers were significantly higher in PC-AKI compared to both the controls and the NSAID+L-NAME group, whereas there was no difference between the controls and the NSAID + L-NAME group. Results were expressed as means $\pm$ SEMs. N=4 for each group. Statistical significance: \*\* $P$ <0.01 and \*\*\* $P$ <0.001 Con vs PC-AKI, ### $P$ <0.001 NSAID+L-NAME vs PC-AKI. Abbreviation: PC-AKI; post-contrast acute kidney injury

### Supplementary Figure 3



**Supplementary Figure 3.** Effect on glycyrrhizin on kidney injury marker in urinary and serum using ELISA. KIM-1 in urine (A) and serum IL-18 (B) was significantly higher in PC-AKI group compared to control group, where they were significantly lower in PC-AKI with glycyrrhizin group compared to PC-AKI group. Statistical significance: \* $P < 0.05$  and \*\*\* $P < 0.001$  Con vs PC-AKI and Con vs PC-AKI+GL, ## $P < 0.01$  and ### $P < 0.001$  PC-AKI vs PC-AKI+GL. Abbreviation: PC-AKI; Post-contrast acute kidney injury, GL; glycyrrhizin, ELISA; Enzyme-Linked immunosorbent Assay.

#### Supplementary Figure 4. Blood pressure

|           | SBP       | DBP        | MAP        |
|-----------|-----------|------------|------------|
| Con       | 133.5±8.5 | 119.3±6.9  | 124.0±7.5  |
| PC-AKI    | 123.3±7.0 | 104.8±14.1 | 110.9±11.5 |
| GL+PC-AKI | 127.0±7.3 | 104.5±11.9 | 112.0±20.9 |

Abbreviation; Post contrast-acute kidney injury; PC-AKI, Glycyrrhizin; GL, Systolic blood pressure; SBP, Diastolic blood pressure; DBP, Mean arterial pressure; MAP. MAP measurement calculation;  $DBP + 1/3(SBP - DBP)$ . No statistical difference among 3 groups.