

Supplementary Table 1 Contents of Tyr and 3-MH in skeletal muscle tissues of rats

Group	Tyr (nmol/g)	3-MH (nmol/g)
Sham	302.41 ± 31.42	1.04 ± 0.12
CLP	584.41 ± 35.41*	5.14 ± 0.23*
oe-NC	561.12 ± 45.57	5.34 ± 0.44
oe-RNF7	712.25 ± 41.12 [#]	7.52 ± 0.64 [#]
sh-NC	565.12 ± 45.57	5.48 ± 0.44
sh-RNF7	384.52 ± 39.52 [#]	2.52 ± 0.41 [#]

* $p < 0.05$ vs. sham-operated rats and # $p < 0.05$ vs. CLP rats treated with sh-NC or oe-NC. N = 10 for rats upon each treatment.

Supplementary Table 2 Measurement of oxidative stress-related factor activity

Group	SOD (U/mg)	MDA (nmol/mg)	CAT (U/mg)	NO (umol/g)	GSH-PX (U/mg)
Sham	81.42 ± 8.12	3.51 ± 0.41	21.41 ± 1.42	0.50 ± 0.06	90.04 ± 10.06
CLP	20.41 ± 2.41*	17.58 ± 1.16*	5.41 ± 0.52*	3.04 ± 0.32*	38.08 ± 3.29*
oe-NC	21.41 ± 2.41	18.58 ± 1.16	5.71 ± 0.52	3.14 ± 0.32	38.28 ± 3.29
oe-RNF7	10.04 ± 0.53 [#]	31.52 ± 0.89 [#]	2.25 ± 0.13 [#]	5.78 ± 0.52 [#]	20.41 ± 2.26 [#]
sh-NC	20.81 ± 2.41	17.88 ± 1.16	5.24 ± 0.52	3.08 ± 0.32	37.89 ± 3.29
sh-RNF7	49.94 ± 4.26 [#]	13.01 ± 0.79 [#]	10.89 ± 0.98 [#]	1.81 ± 0.14 [#]	64.04 ± 11.75 [#]

* $p < 0.05$ vs. sham-operated rats and # $p < 0.05$ vs. CLP rats treated with sh-NC or oe-NC. N = 10 for rats upon each treatment.

Supplementary Table 3 Measurement of the levels of proinflammatory factors

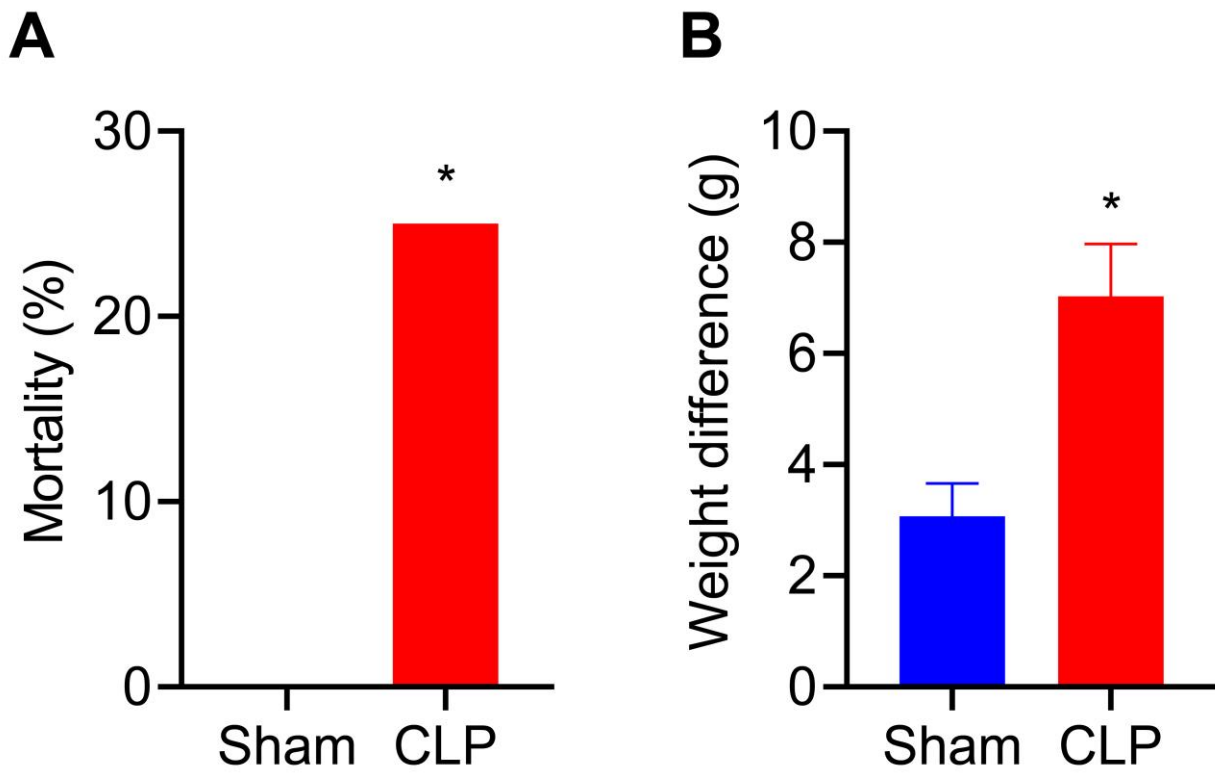
Group	TNF- α (pg/mL)	IL-6 (pg/mL)	IL-1 β (pg/mL)
Sham	25.41 \pm 2.41	30.65 \pm 2.69	20.41 \pm 3.64
CLP	78.54 \pm 6.80*	75.54 \pm 6.37*	91.27 \pm 8.69*
oe-NC	77.54 \pm 6.80	73.54 \pm 6.37	89.27 \pm 8.69
oe-RNF7	109.85 \pm 8.19 [#]	97.24 \pm 5.63 [#]	129.41 \pm 6.27 [#]
sh-NC	77.68 \pm 6.80	74.65 \pm 6.37	92.02 \pm 8.69
sh-RNF7	52.24 \pm 5.29 [#]	50.01 \pm 4.15 [#]	63.14 \pm 5.88 [#]

* $p < 0.05$ vs. sham-operated rats and # $p < 0.05$ vs. CLP rats treated with sh-NC or oe-NC. N = 10 for rats upon each treatment.

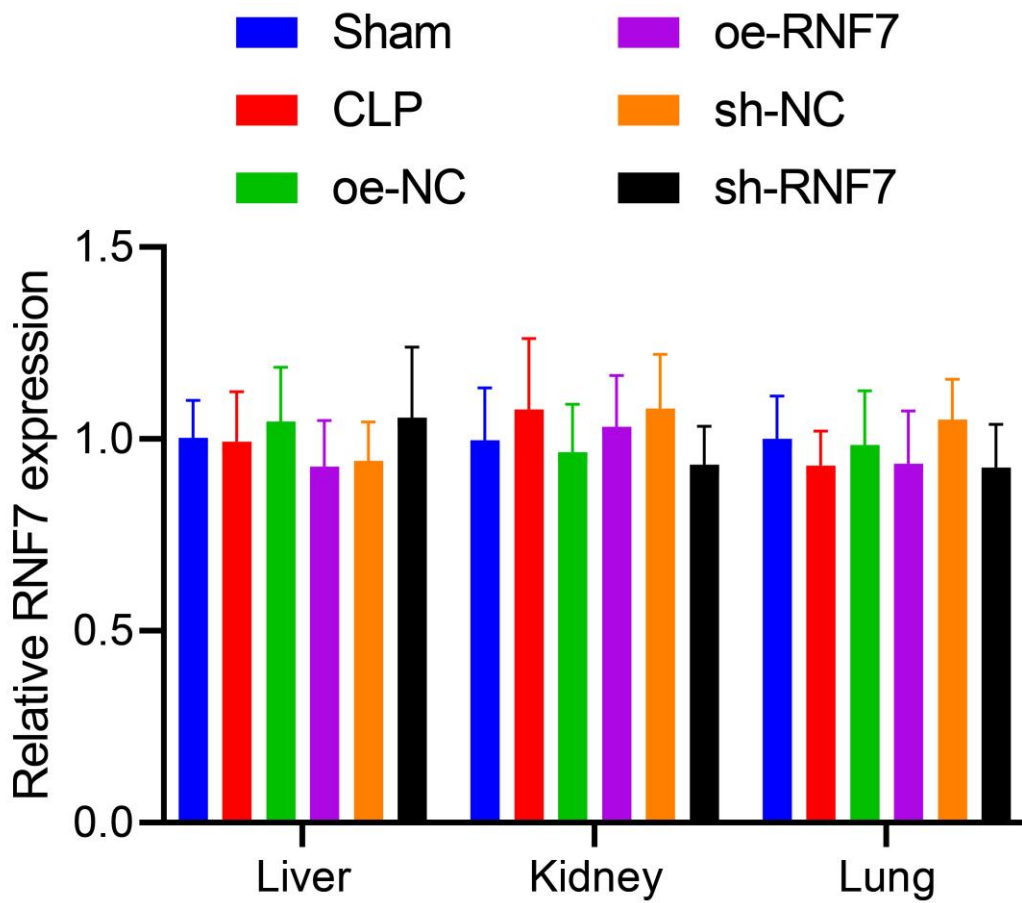
Supplementary Table 4 Primer sequences for RT-qPCR

Gene	Sequences
RNF7 (rat)	Forward: 5'-TCCTTTCCTCGCATTCTGGG-3' Reverse: 5'-AAGACAGGCATCTGGACCCT-3'
THBS1 (rat)	Forward: 5'-TTTGCGGAGAGGACACAGAC-3' Reverse: 5'-TCATAGTCTTCCTGCCCCGA-3'
β -actin (rat)	Forward: 5'-CCACCATGTACCCAGGCATT-3' Reverse: 5'-CGGACTCATCGTACTCCTGC-3'

RT-qPCR: reverse transcription quantitative polymerase chain reaction; THBS1: thrombospondin 1; F: forward; R: reverse.



SUPPLEMENTARY FIG 1 A, Postoperative death and survival of sham-operated rats (n=15) and CLP rats (n=120) (1 week). B, Postoperative weight difference between Sham and CLP model rats (1 week). * $p < 0.05$ vs. sham-operated rats.



SUPPLEMENTARY FIG 2 RT-qPCR analysis of RNF7 expression in the rat liver, kidney, and

lung tissues upon each treatment. N = 10.