

Supporting information

Kaempferol Attenuates Cardiac Hypertrophy via Regulation of ASK1/MAPK Signaling Pathway and Oxidative Stress

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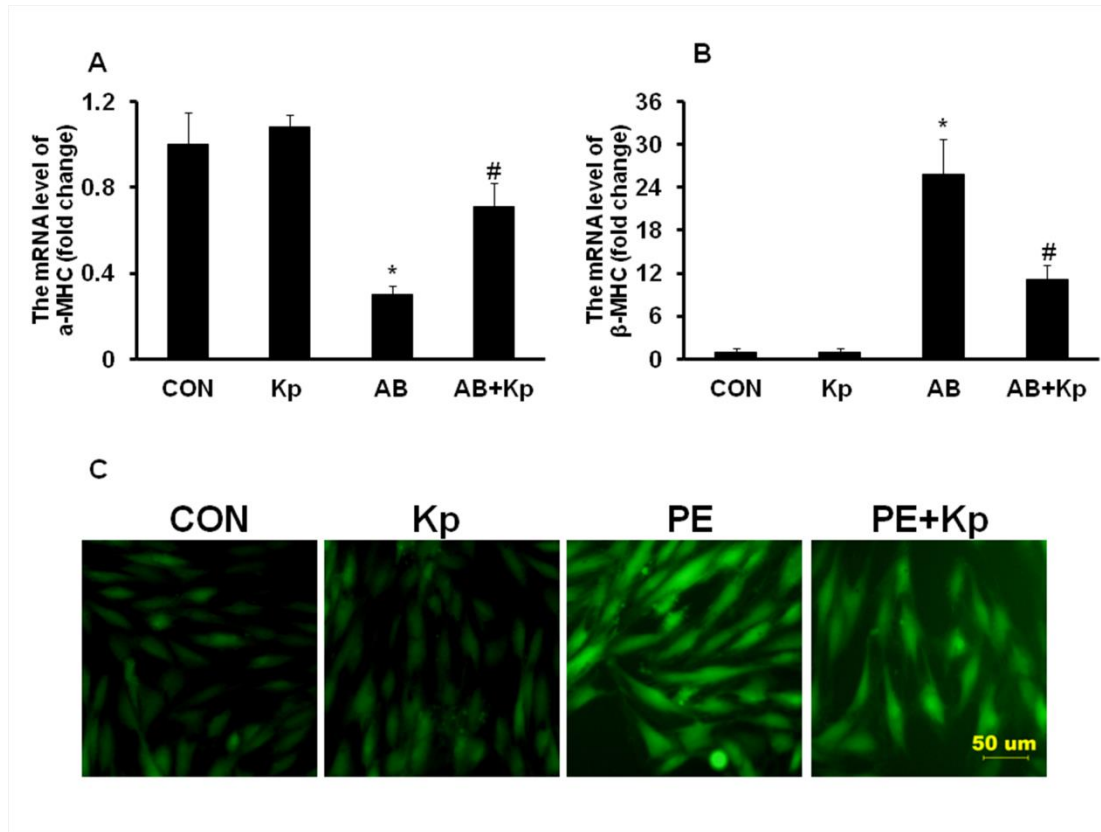


Fig. S1 **A, B** The mRNA levels of α -MHC and β -MHC of *in vivo* studies. **C** Representative images indicating the effect of kaempferol treatment on oxidative stress.

* $P < 0.05$ compared to the control group; # $p < 0.05$ compared to the AB group. AB: aorta banding, CON: control group, Kp: kaempferol, PE: phenylephrine.

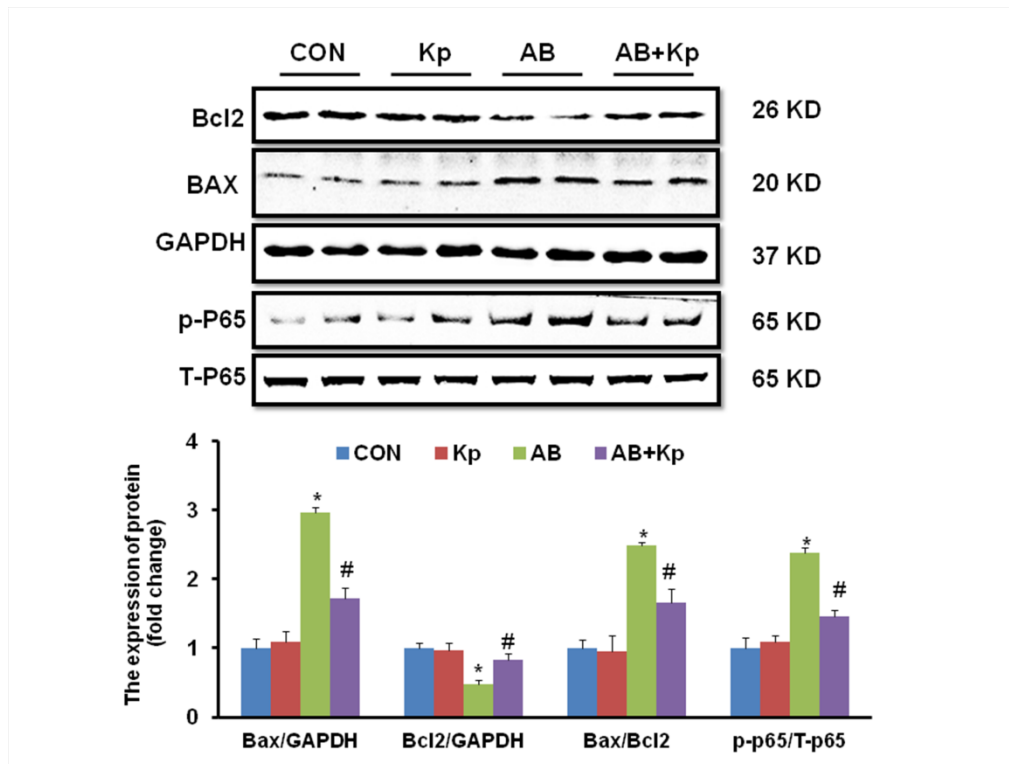


Fig. S2 Representative immunoblots indicating the antiapoptotic and anti-inflammatory effect of kaempferol treatment by the *in vivo* study. * $P < 0.05$ compared to the control group; # $p < 0.05$ compared to the AB group. AB: aorta banding, CON: control group, Kp: kaempferol.

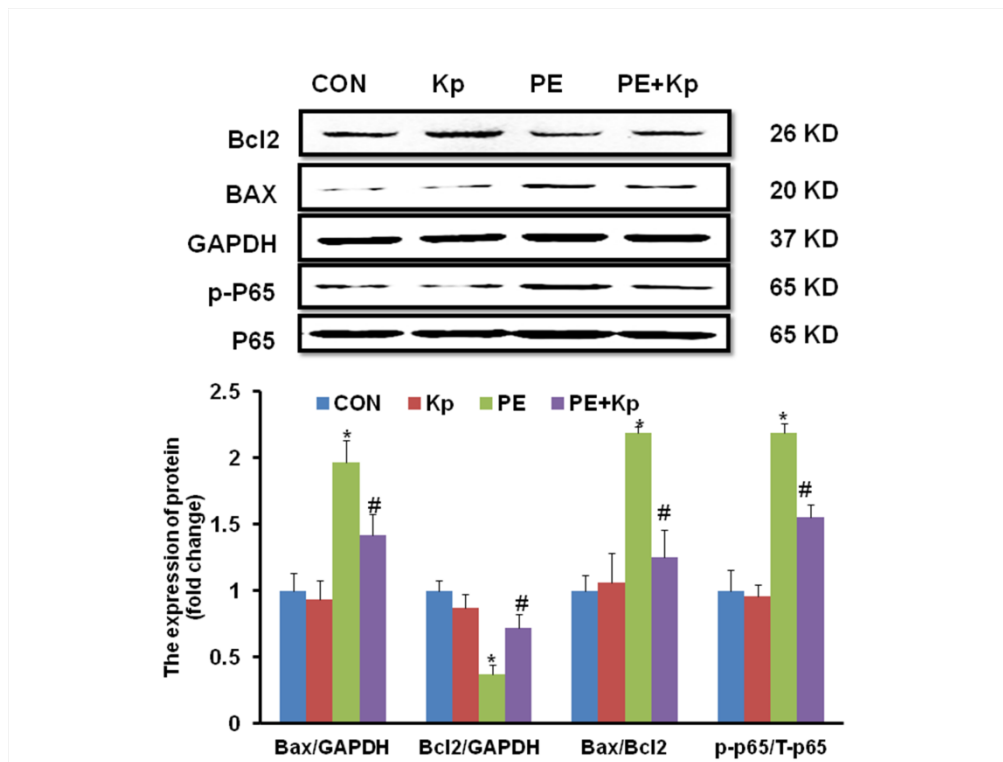


Fig. S3 Representative immunoblots indicating the antiapoptotic and anti-inflammatory effect of kaempferol treatment by the *in vitro* study. * $P < 0.05$ compared to the control group; # $p < 0.05$ compared to the AB group. CON: control group, Kp: kaempferol, PE: phenylephrine.

Table S1 Primes for RT-qPCR of ANP, BNP, α -MHC, β -MHC, fibronectin, CTGF, and collagens I and III.

Genes	Primers
ANP	Forward: AATCCTGTGTACAGTGCGGTG Reverse: GACCTCATCTTCTACCGGCAT
BNP	Forward: ACAGCTCTTGAAGGACCAAGG Reverse: CTATCTTGTGCCCAAAGCAGC
α-MHC	Forward: ATGAGACGGTGGTGGGTTTG Reverse: CACCGGTATCAGCAGAAGCA
β-MHC	Forward: ACTTCCAGAAGCCTCGAAATG Reverse: TTGTTCTTCTGTAGCCAGCCC
Fibronectin	Forward: AGCCTTCACACATCACCAAGT Reverse: AAGGTGGCCAGGAATGGTAG
CTGF	Forward: AGTGGAGCGCCTGTTCTAAG Reverse: CTCCAGTCTGCAGAAGGTATTG
Collagen I	Forward: CTGGTATTGCTGGTGCTCCT Reverse: CTTTGGCACCAGTGTCTCCT
Collagen III	Forward: AGGTGGACCAGGCAATGATG Reverse: CAGGGAAACCCATGACACCA

Table S2 Cardiac function measured with echocardiography 6 weeks after treatment.

Variable	Con (n = 10)	Kp (n = 10)	AB (n = 16)	AB + Kp (n = 16)
Heart rate (bpm)	554 ± 15	542 ± 12	548 ± 16	557 ± 14
LVID; d (mm)	2.99 ± 0.12	3.02 ± 0.13	4.52 ± 0.18 [*]	3.71 ± 0.11 [#]
LVID; s (mm)	1.55 ± 0.09	1.60 ± 0.13	3.34 ± 0.12 [*]	2.40 ± 0.14 [#]
LVPW; d (mm)	0.84 ± 0.11	0.86 ± 0.08	1.41 ± 0.12 [*]	1.21 ± 0.15 [#]
LVPW; s (mm)	1.18 ± 0.13	1.20 ± 0.07	1.65 ± 0.09 [*]	1.53 ± 0.16 [#]
LV Vol; d (uL)	34.78 ± 3.21	35.49 ± 3.04	93.41 ± 4.22 [*]	58.62 ± 3.31 [#]
LV Vol; s (uL)	6.60 ± 1.17	7.17 ± 1.06	45.44 ± 2.93 [*]	20.16 ± 1.25 [#]
EF (%)	81.03 ± 3.40	79.80 ± 2.87	51.36 ± 2.09 [*]	65.61 ± 2.63 [#]
FS (%)	48.20 ± 1.65	46.97 ± 1.71	26.11 ± 0.95 [*]	35.36 ± 1.01 [#]

LVID; d: left ventricular internal diameter (diastole); LVID; s: left ventricular internal diameter (systole); LVPW; d: left ventricular posterior wall(diastole); LVPW; s: left ventricular posterior wall (systole); EF: ejection fraction; FS: fractional shortening; LV Vol; d: left ventricle volume

diastole; LV Vol; s: left ventricle volume systole. *P < 0.05 compared to the control group; #p < 0.05 compared to the AB group.