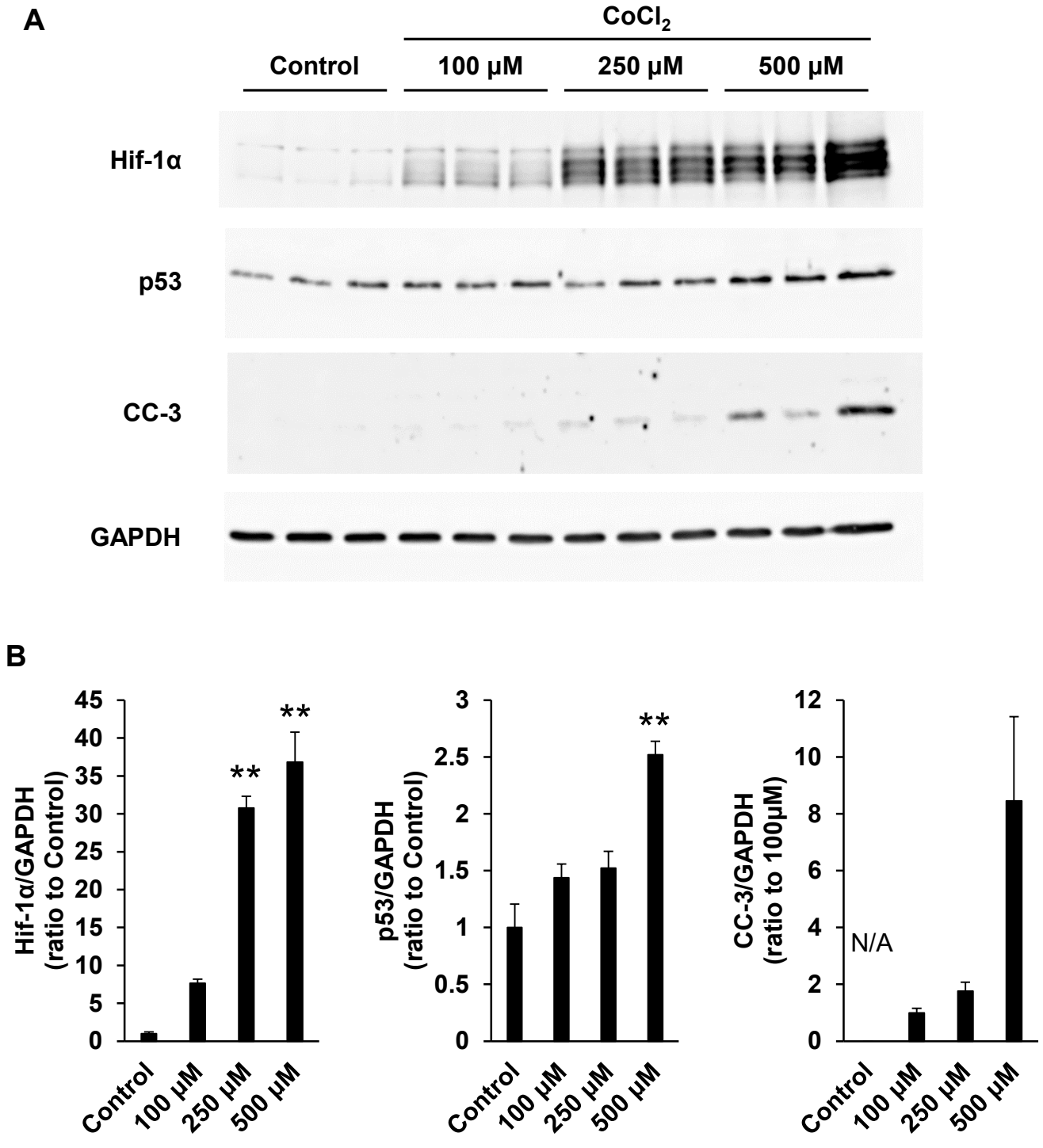
SUPPLEMENTAL MATERIAL

Table S1. Primer sequences used in this study.

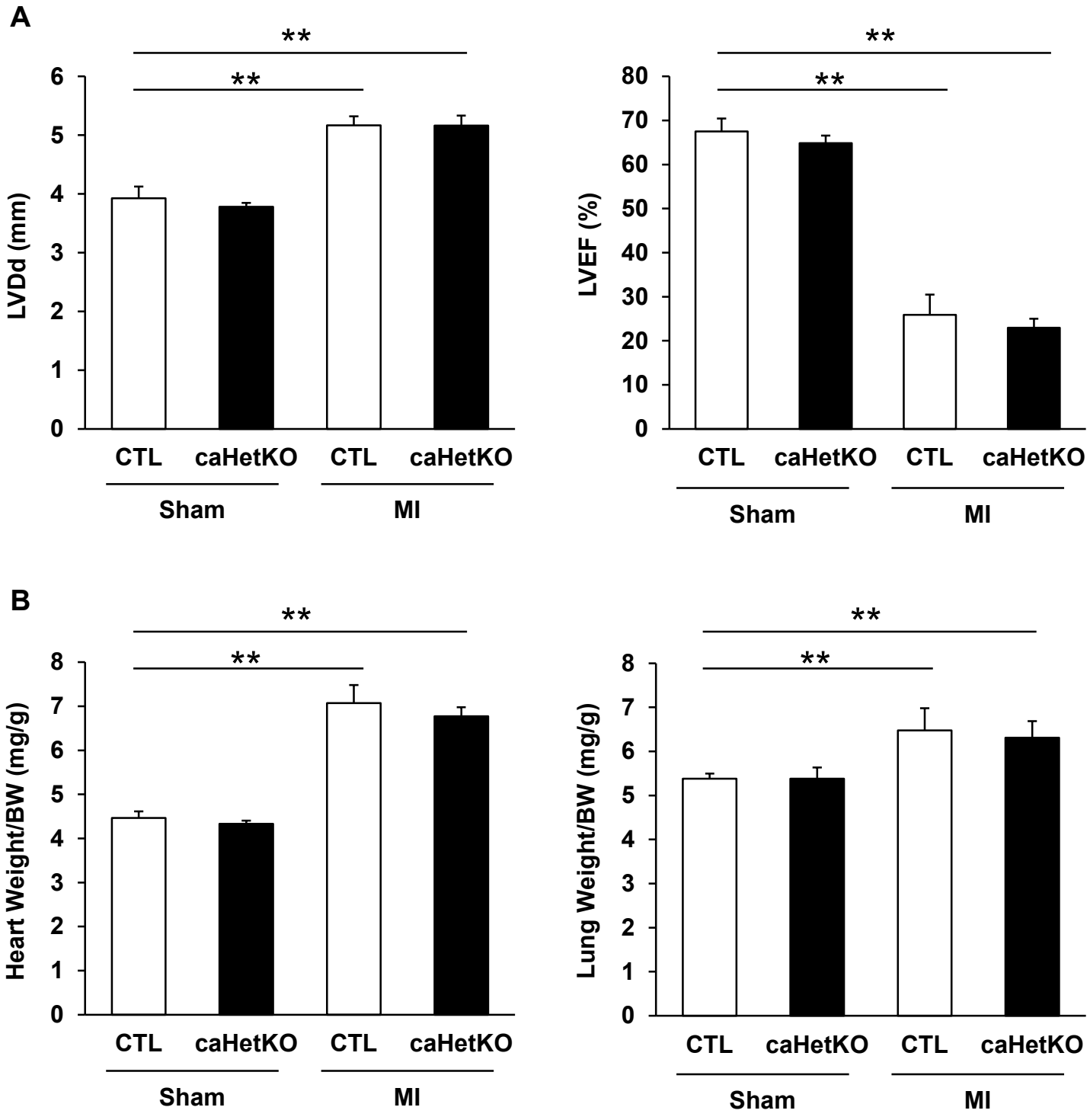
Rattus norvegicus	F/R	primer sequence
Rps18	F	AAGTTTCAGCACATCCTGCGAGTA
	R	TTGGTGAGGTCAATGTCTGCTTTC
Tp53	F	TCCAGTTCATTGGGACTTATCCTTG
	R	GCTCATATCCGACTGTGAATCCTC
Mmp2	F	TCCCGAGATCTGCAAGCAAG
	R	AGAATGTGGCCACCAGCAAG
Mmp9	F	AGCCGGGAACGTATCTGGA
	R	TGGAAACTCACACGCCAGAAG
Timp1	F	CATCTCTGGCCTCTGGCATC
	R	CATAACGCTGGTATAAGGTGGTCTC
Timp2	F	GACACGCTTAGCATCACCCAGA
	R	CTGTGACCCAGTCCATCCAGAG
Timp3	F	AGGGCTGTGCAACTTTGTGG
	R	TCTTGGAGGTCACAAAGCAAGG
Timp4	F	GCCTGAATCATCACTACCACCAGA
	R	GAGATGGTACACGGCACTGCATA

Figure S1. Dose-dependency of cobalt chloride ($CoCl_2$) for Hif-1α, p53, and cleaved caspase (CC)-3 expression in isolated cardiomyocytes under PHD inhibition.



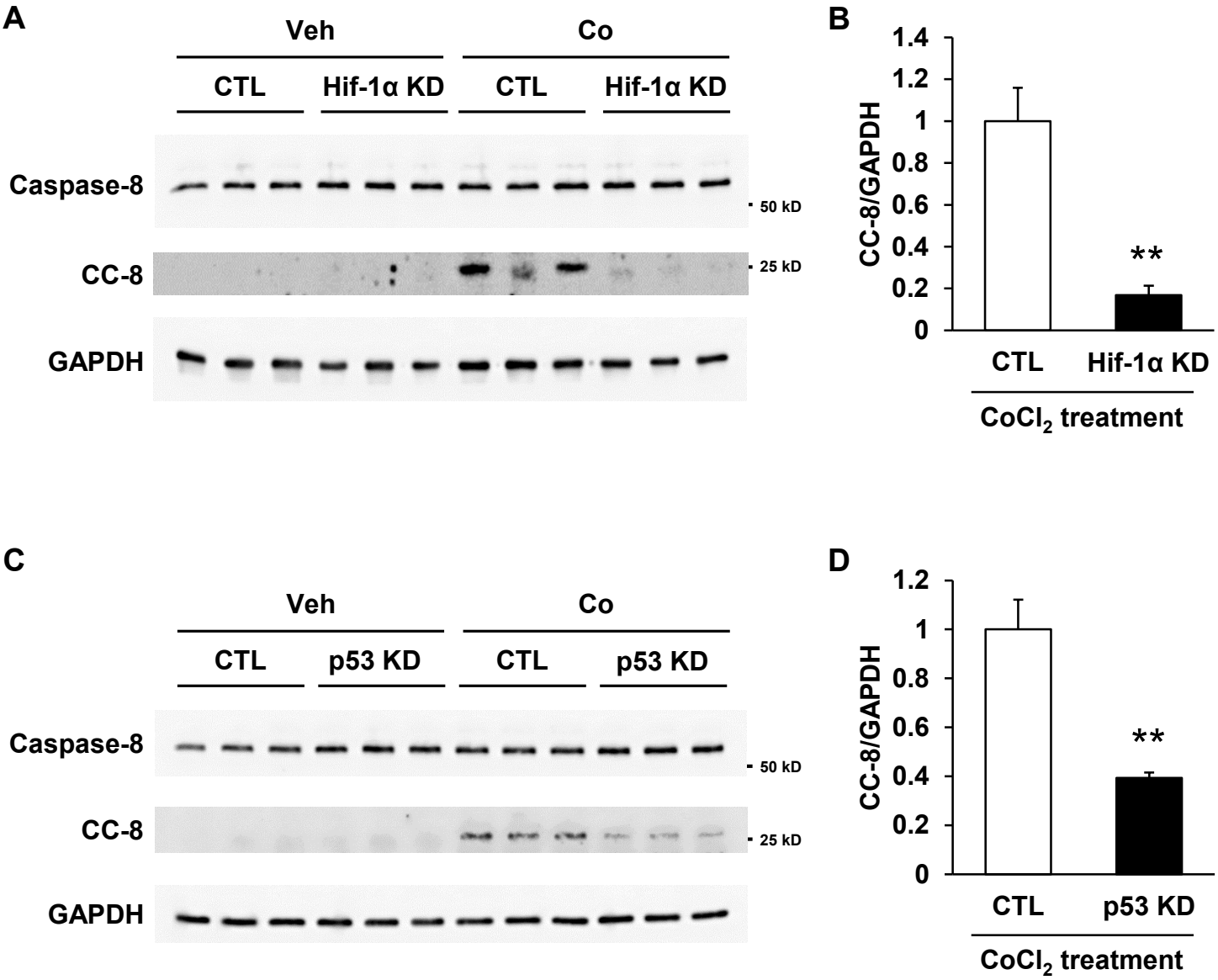
A, Expression of Hif-1α, p53, and CC-3 in cultured cardiomyocytes under $CoCl_2$ treatment. GAPDH was used as a loading control. **B**, Quantification of western blots shown in Figure S1A; n = 3 in each group. Data are shown as the mean ± SEM. $*P < 0.05$, $**P < 0.01$ vs. Control, analyzed using Dunnett's test.

Figure S2. Physiological parameters in CTL and caHetKO mice at day 5 after MI.



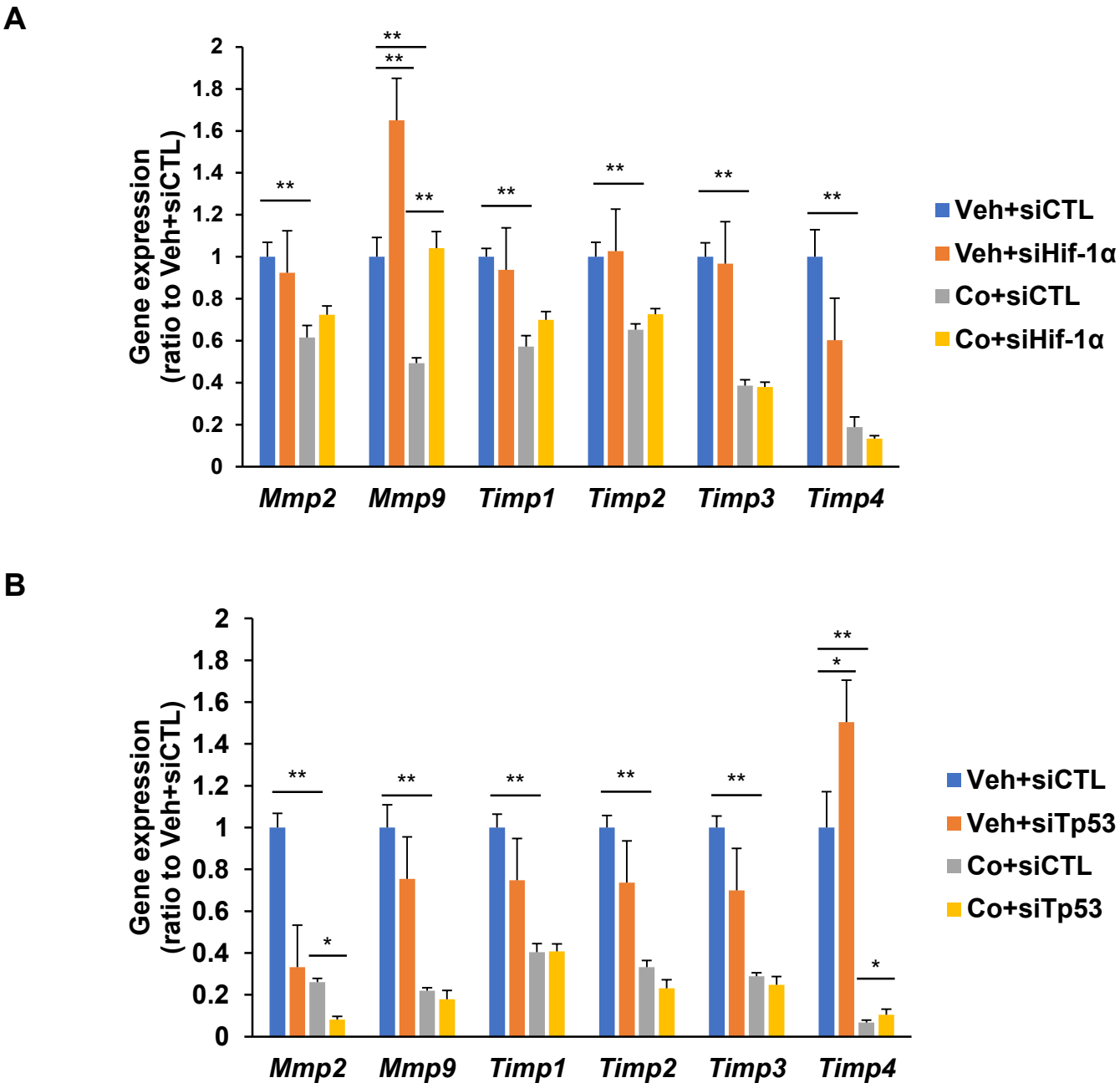
A, Echocardiographic measurements (left ventricular diameter in diastole [LVDd] and left ventricular ejection fraction [LVEF]) in CTL and caHetKO mice at day 5 after MI. **B,** Heart and lung weights in CTL and caHetKO mice at day 5 after MI. Data are shown as the mean ± SEM. $^{**}P < 0.01$ vs. Control, analyzed using one-way ANOVA, followed by Tukey's post-hoc test.

Figure S3. Cleavage of caspase-8 induced by cobalt chloride ($CoCl_2$) treatment in cultured cardiomyocytes, transfected with siRNA targeting Hif-1α and p53.



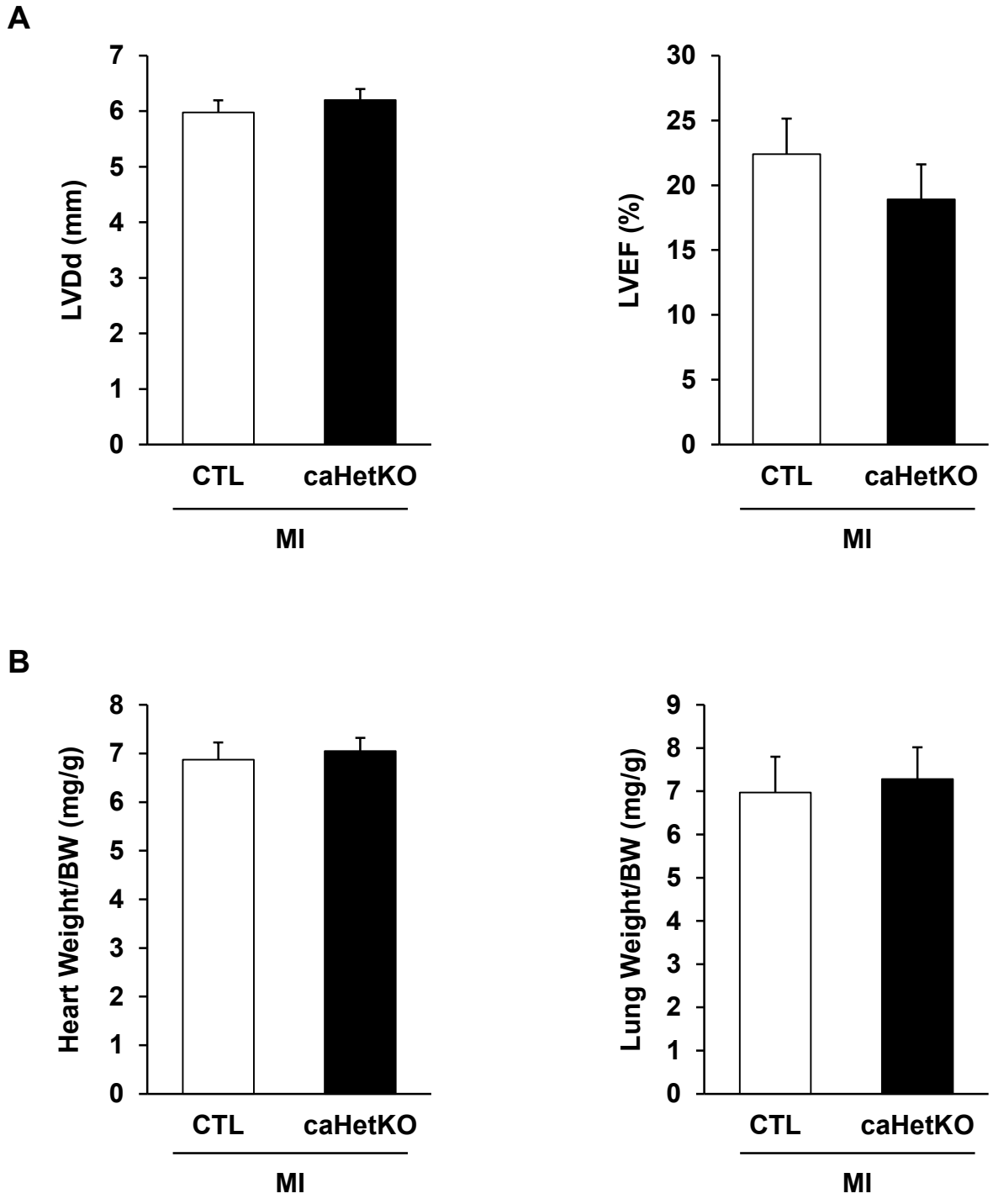
A, Expression of cleaved caspase-8 in cultured cardiomyocytes under $CoCl_2$ treatment, transfected with siRNA targeting Hif-1α. GAPDH was used as a loading control. **B**, Quantification of western blots shown in Figure S3A; n = 3 in each group. **C,** Expression of cleaved caspase-8 in cultured cardiomyocytes under $CoCl_2$ treatment, transfected with siRNA targeting p53. GAPDH was used as a loading control. **D**, Quantification of western blots shown in Figure S3C; n = 3 in each group. Data are shown as the mean ± SEM. $^{**}P < 0.01$ vs. Control, analyzed using one-way ANOVA, followed by Student's *t*-test.

Figure S4. Transcriptional expression of matrix-metalloproteinases (MMPs) and tissue inhibitors of metalloproteinases (TIMPs) under cobalt chloride ($CoCl_2$) treatment in cultured cardiomyocytes, transfected with siRNA targeting Hif-1α and p53.



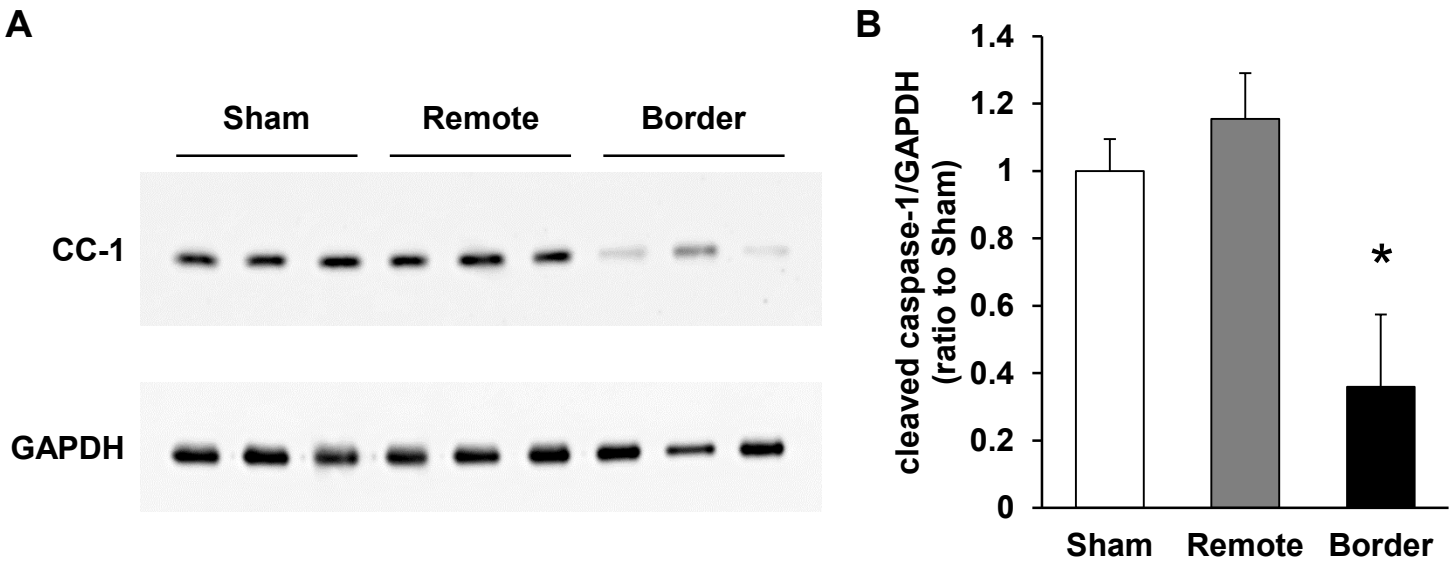
A, *Mmp2*, *Mmp9*, *Timp1*, *Timp2*, *Timp3*, and *Timp4* expression in cultured cardiomyocytes treated with vehicle (Veh) and cobalt chloride ($CoCl_2$, 500 μM) for 24 h, or transfected with siRNA for control (scramble siRNA) and Hif-1α, was quantified by real-time PCR; n = 6 in each group. **B,** *Mmp2*, *Mmp9*, *Timp1*, *Timp2*, *Timp3*, and *Timp4* expression in cultured cardiomyocytes treated with Veh and $CoCl_2$ (500 μM) for 24 h, or transfected with siRNA for control (scramble siRNA) and p53, was quantified by real-time PCR; n = 6 in each group. Data are shown as the mean ± SEM. $*P < 0.05$, $**P < 0.01$, analyzed using one-way ANOVA, followed by Tukey's post-hoc test.

Figure S5. Physiological parameters in CTL and caHetKO mice at the time of sacrifice in survival study.



A, Echocardiographic measurements (left ventricular diameter in diastole [LVDd] and left ventricular ejection fraction [LVEF]) in CTL and caHetKO. **B,** Heart and lung weights in CTL and caHetKO mice. Data are shown as the mean ± SEM.

Figure S6. Cleavage of caspase-1 in the border zone of myocardial infarction (MI).



A, Western blots of cleaved caspase (CC)-1 in the MI border zone. Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) was used as a loading control. **B,** Quantification of western blots shown in Figure S6A; n = 3 in each group. *$P < 0.05$, analyzed by Dunnett's test vs. Sham. Data are shown as a ratio to the Sham group.