

Supplementary Fig. legend

Supplementary Fig. S1: Heart rate and blood pressure of patients undergoing cardiopulmonary bypass. (A) Heart rate of patients. (B-D) Systolic blood pressure, diastolic blood pressure and mean arterial pressure of patients. The results are expressed as the mean±SEM, n = 38. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Supplementary Fig. S2: CAV-1/ACE2 axis plays an important regulatory role in myocardial ischemia/reperfusion (I/R) injury aggravated by Ang II perfusion. (A) The experimental design of observing the role of Ang II perfusion played in the myocardial I/R injury in mice. (B-C) The relative mRNA levels of ACE2 and CAV-1. (D) The experimental design of observing the role of CAV-1 and ACE2 in the aggravation of myocardial I/R injury by Ang II perfusion. The results are expressed as the mean±SEM, n = 8. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Supplementary Fig. S3: Propionate (C3) inhibited the increase level of Ang II through GPR41 during myocardial reperfusion (A) The experimental design of observing the effect of C3 on myocardial I/R injury. (B) The experimental design of observing the role of GPR41 in C3 reducing Ang II levels and myocardial I/R injury. (C) The relative mRNA levels of ACE2 and CAV-1. The results are expressed as the mean±SEM, n = 8. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Supplementary Fig. S4: The effect of C3 and GPR41 on the protein expression

levels of CAV1 and ACE in myocardial tissue during myocardial I/R. (A-C)

CAV-1 and ACE2 immunohistochemical staining and intensity quantification analysis of myocardial tissue in mice with I/R group, I/R + C3 group, I/R + GPR41-shRNA group, I/R + shRNA-con group, I/R+ C3 + GPR41-shRNA. scale bar is 20 μm (n = 3).

The results are expressed as the mean \pm SEM. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table S1 Patient characteristics

Parameter	
Females (n)	17
Males (n)	21
Ages, yr	50 (36-61)
Body mass index, kg m ⁻²	23.90 (18.66-28.73)
Duration of hospitalization, days	22.25 (17-36)
Duration of anesthesia, min	332.44 (274-458)
Duration of surgery, min	272 (221-414)
Duration of CPB, min	127.2 (70-180)
Estimated blood loss, ml	355.5 (300-400)
Duration of ICU, hours	78.57 (39.3-93.33)

Note. Numbers are counts (percentage) or median (interquartile range).

Figure S1

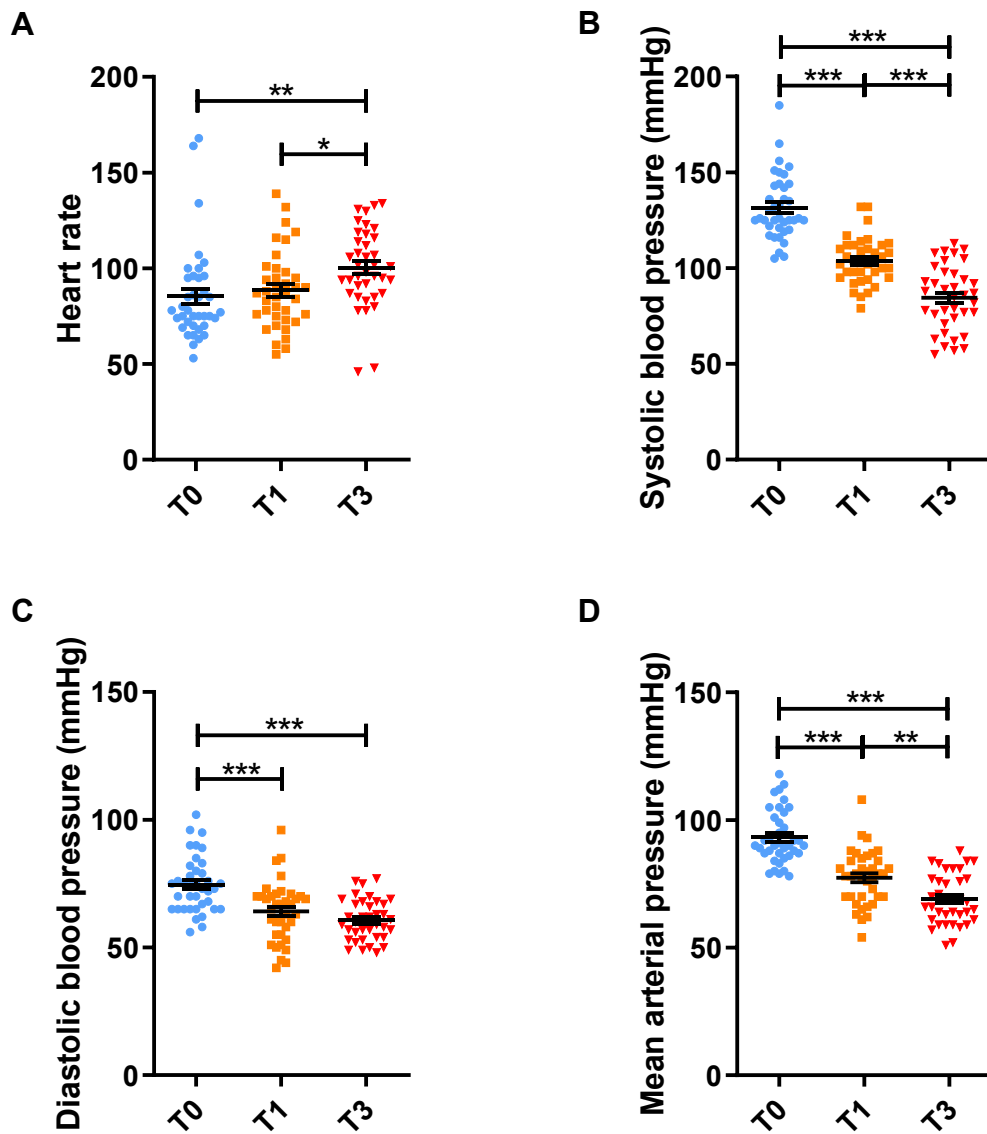
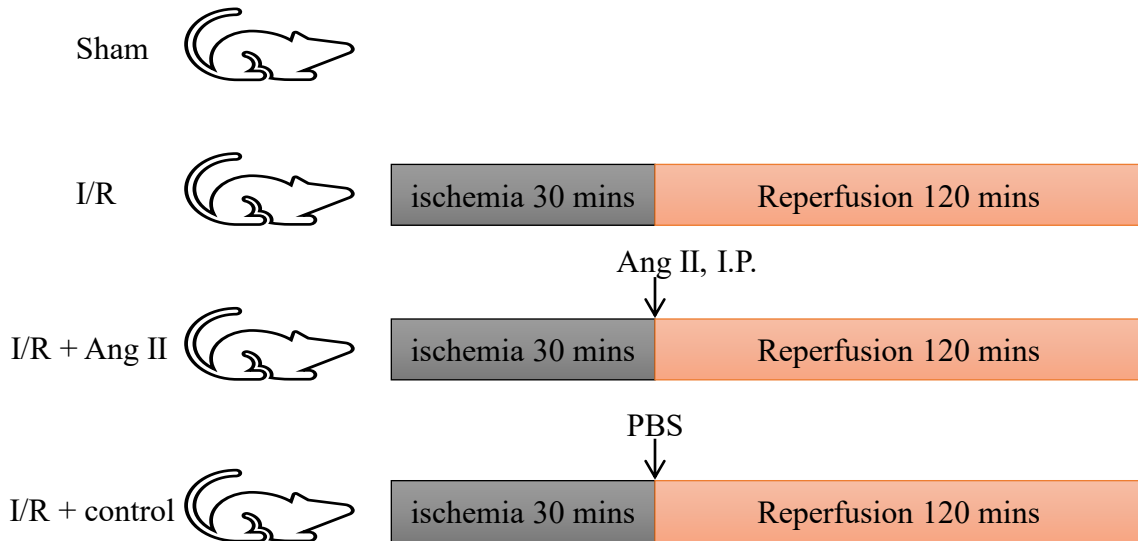
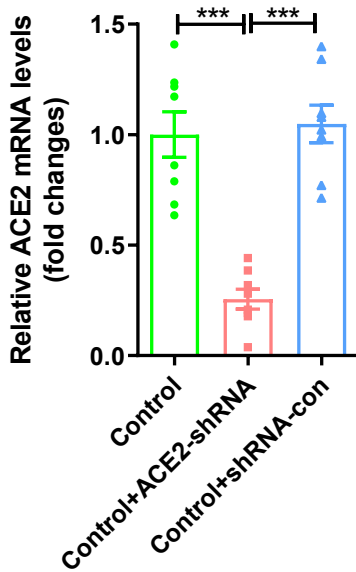


Figure S2

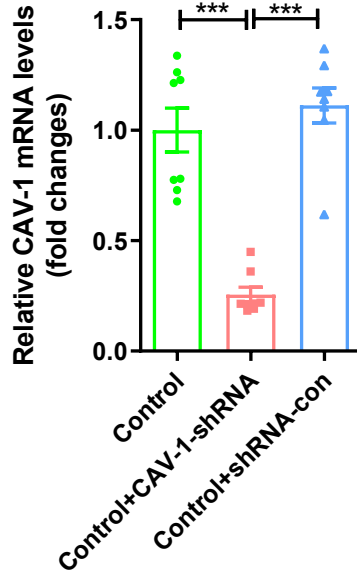
A



B



C



D

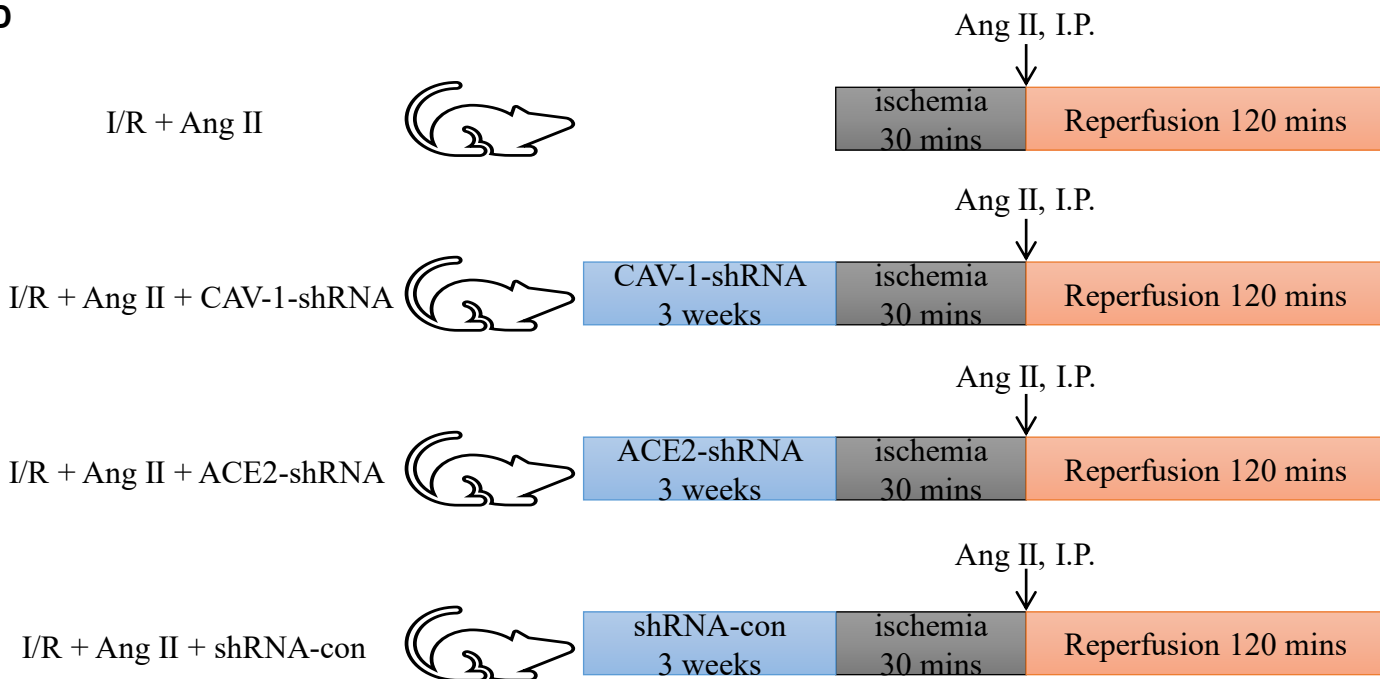


Figure S3

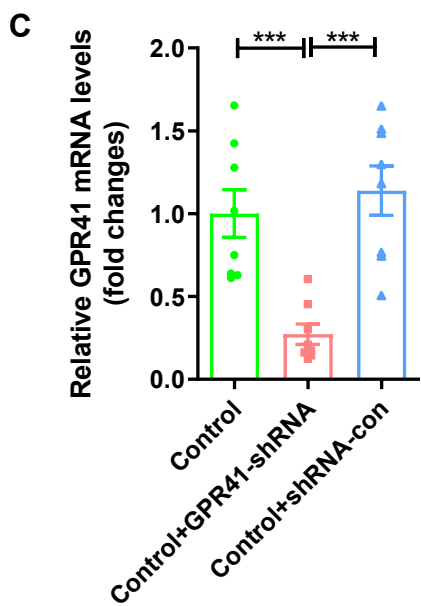
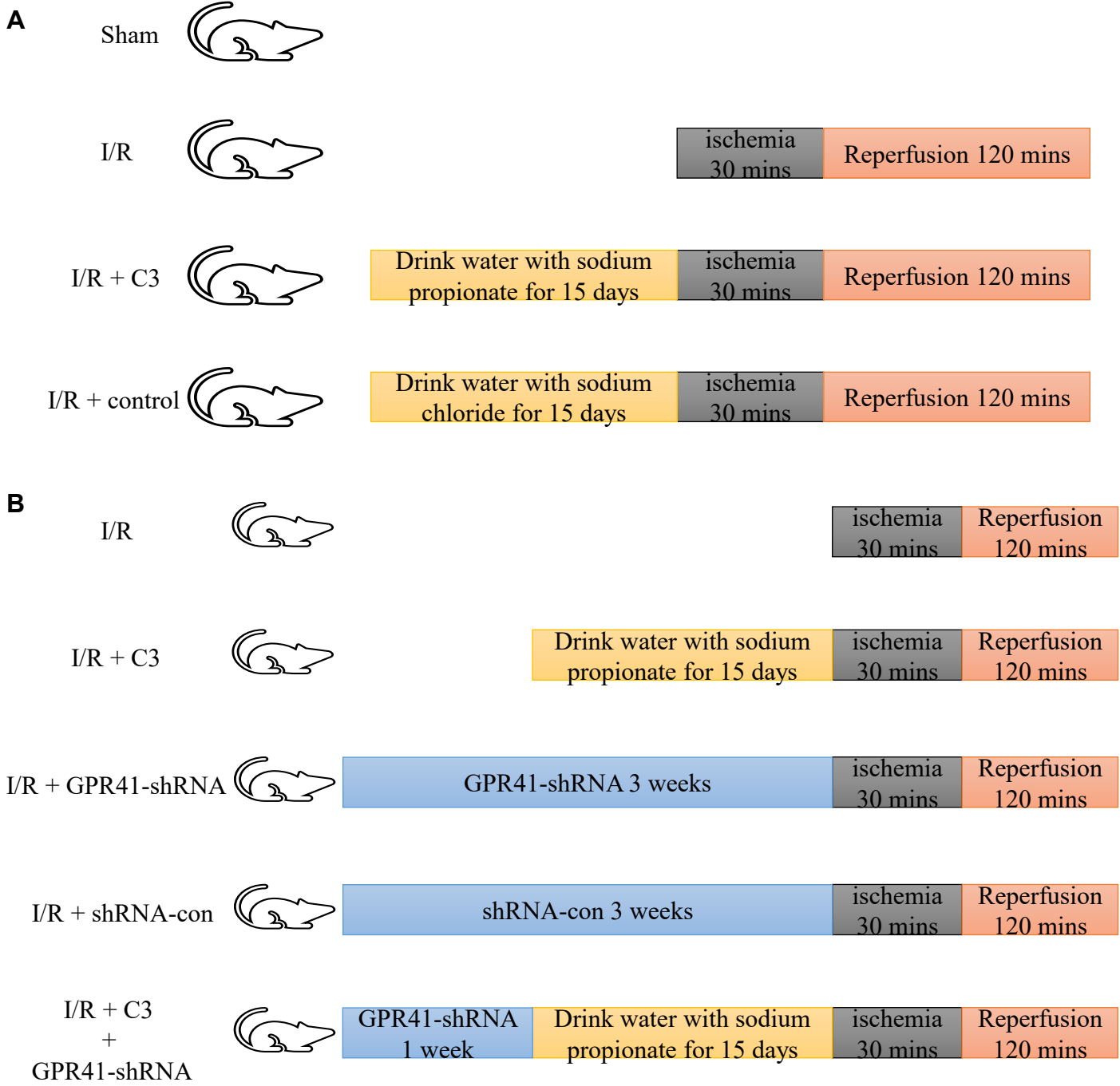


Figure S4

