

Figure S1: Examination of MKK7 abundance and activation following isoprenaline treatment in H9C2. Immunoblots and analyses of cells treated with various concentration of isoprenaline for different timepoints **A** 10 μ M **B** 50 μ M. N=3. All data presented as mean \pm SEM following Kruskal-Wallis Test.

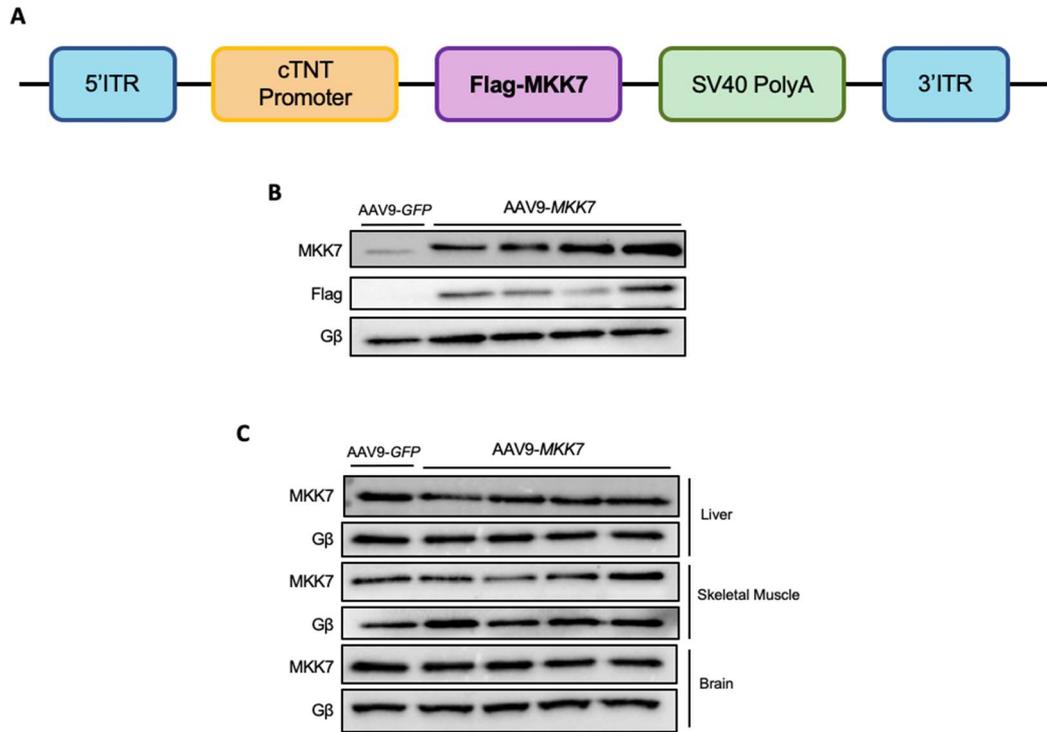


Figure S2: Immunoblot analysis of cardiac-specific overexpression of MKK7 in mice injected with AAV9-TnT-MKK7. **A:** Schematic diagram of constructed AAV9-TnT-MKK7 virus; **B:** Immunoblot confirming MKK7 overexpression upon constructed AAV9-TnT-MKK7 injection in the hearts of C57BL/6J mice; **C:** Immunoblotting confirming no overexpression or change in MKK7 expression in the liver, skeletal muscle or brain of AAV9-TnT-MKK7 injected mice.

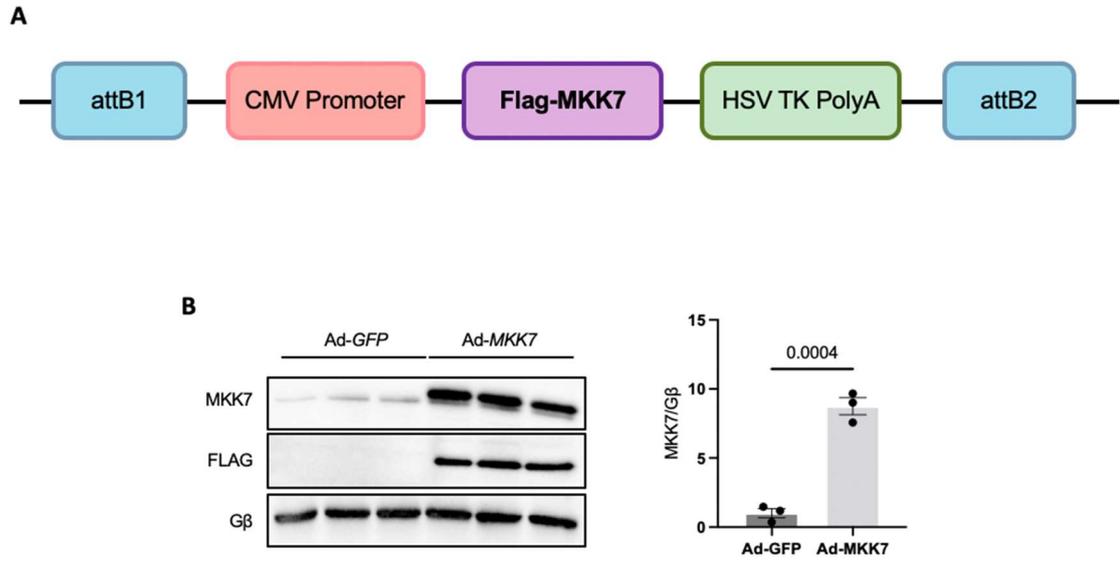


Figure S3: MKK7 overexpression in H9C2 cells. **A:** Schematic diagram of Ad-*MKK7* adenoviral vector; **B:** Immunoblot and quantification confirming overexpression of MKK7 in H9C2 cells infected with Ad-*MKK7* 48 hours after infection.