# Science Advances

### Supplementary Materials for

#### The adenine nucleotide translocase family underlies cardiac ischemiareperfusion injury through the mitochondrial permeability pore independently of cyclophilin D

Pooja Patel et al.

Corresponding author: Jason Karch, jason.karch@bcm.edu

*Sci. Adv.* **10**, eadp7444 (2024) DOI: 10.1126/sciadv.adp7444

#### This PDF file includes:

Figs. S1 to S4

## **Supplementary Materials**

### **Supplementary Figure 1**



Supplementary Figure 1: ANT-cTKO hearts are similar in function and dimension in comparison to ANT2only hearts and WT hearts. (A-G) Echocardiographic analysis of WT (grey), ANT2-only (blue) and ANT-cTKO (purple). All mice were 3 months of age.



Supplementary Figure 2: ANT-cTKO cardiac mitochondria have decreased response to ADP. (A) Mitochondrial stress test performed on 3.5-month-old WT (black), ANT2-only (blue) and ANT cTKO (purple) heart mitochondria. Oxygen consumption rate (OCR) was measured during sequential treatments of 500  $\mu$ M ADP, 10  $\mu$ M oligomycin, 5  $\mu$ M FCCP, and 1  $\mu$ M rotenone. \*p≤0.05, \*\*p≤0.001, \*\*\*p≤0.0001, \*\*\*\*p≤0.0001 comparison between WT and ANT2-only. # p≤0.05, ###p≤0.0001, ####p≤0.0001 comparison between WT and ANT2-only. # p≤0.05, ###p≤0.0001, ####p≤0.0001 comparison between WT and ANT2-only.

### **Supplementary Figure 3**



Supplemental Figure 3: ANT1P62A expressing hearts and ANT1P62A-only expressing hearts are similar in function and dimension as WT hearts. (A-G) Echocardiographic analysis of 3-month-old WT (dark grey, n=12), ANT1P62A (green, n=12) and ANT1P62A-only mice (orange, n=10). \* $p\leq0.05$ .



Supplemental Figure 4: ANT1P62A-only expressing mitochondria have reduced OCR and maximal respiratory capacity. (A) Mitochondrial stress test performed on 3-month-old WT (grey), ANT1P62A (green) and ANT1P62A-only (orange) heart mitochondria. Oxygen consumption rate (OCR) was measured during sequential treatments of 500  $\mu$ M ADP, 10  $\mu$ M oligomycin, 5  $\mu$ M FCCP, and 1  $\mu$ M rotenone. \*p≤0.05, \*\*p≤0.001, \*\*\*p≤0.0001 comparison between WT and ANT1P62A. # p≤0.05, ####p≤0.00001 comparison between WT and ANT1P62A.