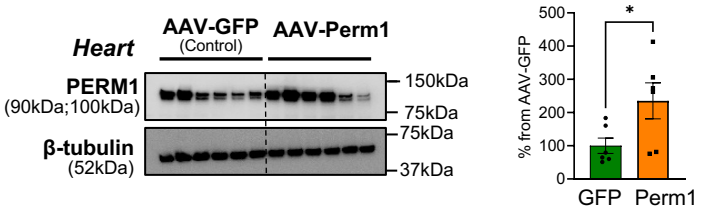
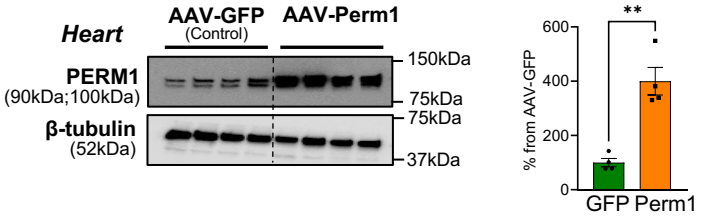
Supplemental Figure S1 - *Additional PERM1 protein expression data.*
Analysis of PERM1 protein expression and echocardiography were performed in total of 13 AAV-GFP mice and 17 AAV-Perm1 mice. For mostly logistical reasons, these mice were used in three batches. In the first batch, 6 AAV-GFP mice and 6 AAV-Perm1 mice were used. In the second batch, 7 AAV-GFP mice and 7 AAV-Perm1 mice were used. In the third batch, 4 AAV-Perm1 mice were used. **Figure 1C-D** in the main text presents the Western blotting analysis results obtained in the second batch. **Supplemental Figure S1 A and B** below present the Western blotting analysis results obtained in the first and the third batch, respectively. Since the third batch did not have AAV-GFP mice, four randomly chosen samples from AAV-GFP mice from the second batch were used as controls in the Western blotting



Supplemental Figure S1-A. Western blotting analysis of cardiac PERM1 expression 4 weeks after AAV-GFP (control) and AAV-Perm1 injection in the first batch of mice (n=6/group; $p<0.05$ by unpaired two-sided t-test).



Supplemental Figure S1-B. Western blotting analysis of cardiac PERM1 expression 4 weeks after AAV-GFP (control) and AAV-Perm1 injection in the third batch of mice (n=4/group; $p<0.01$ by unpaired two-sided t-test). These 4 AAV-GFP mice on this blot were randomly selected from the 7 AAV-GFP mice that were used in the second batch of mice (the same as shown in **Figure 1B-C** in main text).