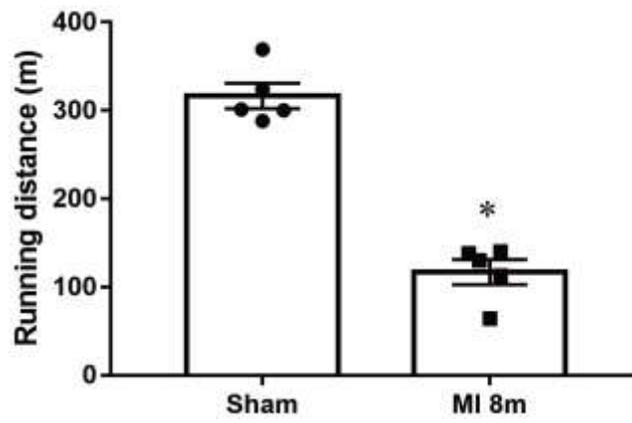
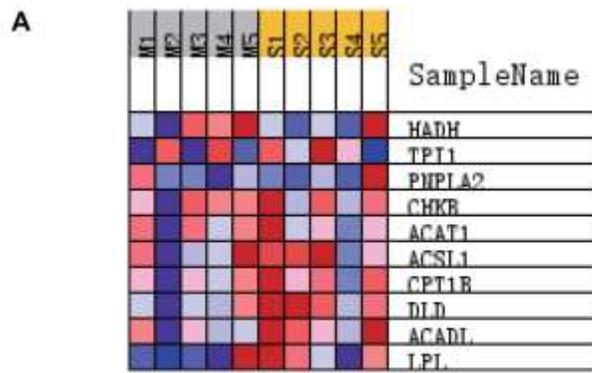


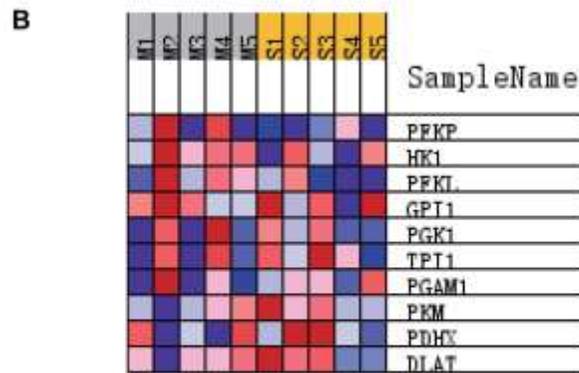
SUPPLEMENTARY FIGURES



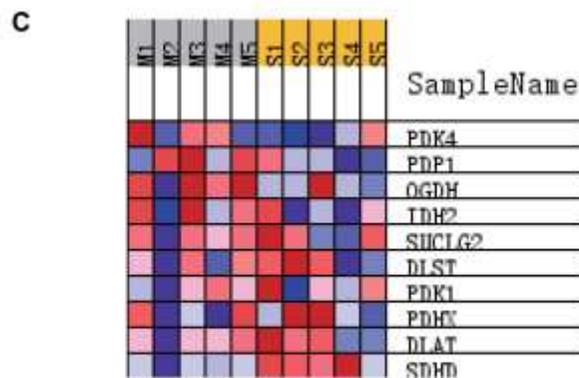
Supplementary Figure 1. Running distance during exercise exhaustion test in mice at 8 months after MI.



FATTY\_ACID\_BETA\_OXIDATION

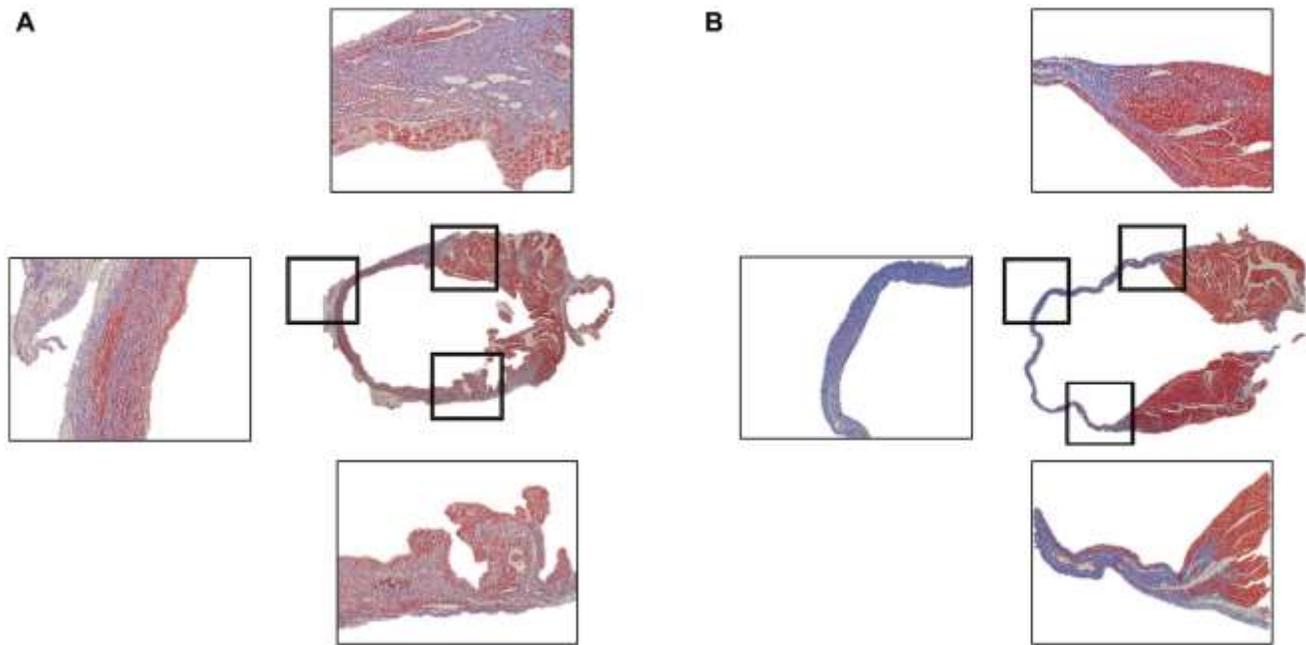


GLYCOLYSIS\_AND\_GLUONEOGENESIS

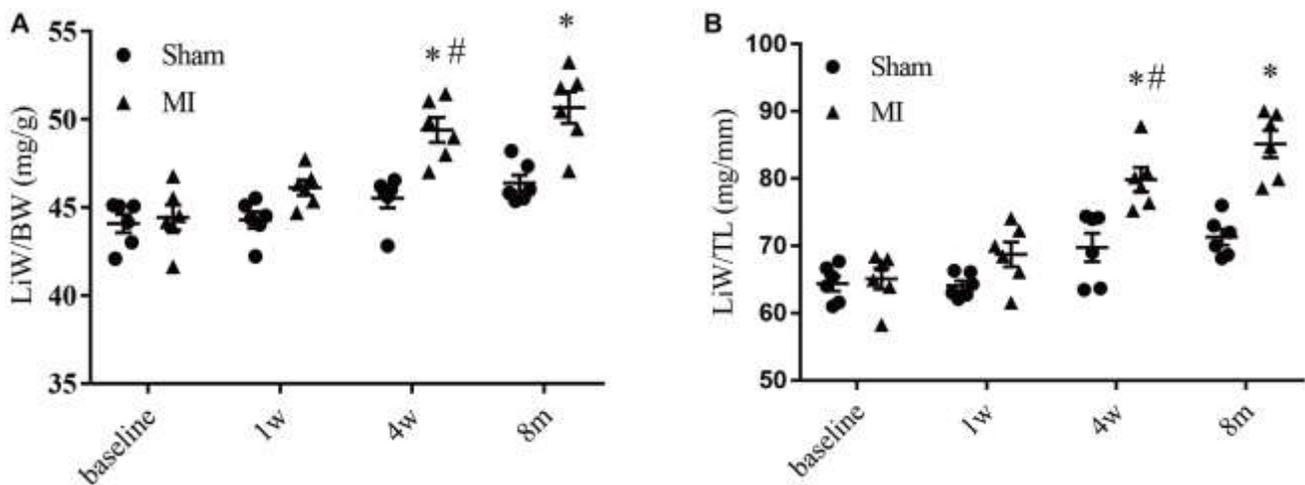


TCA\_CYCLE

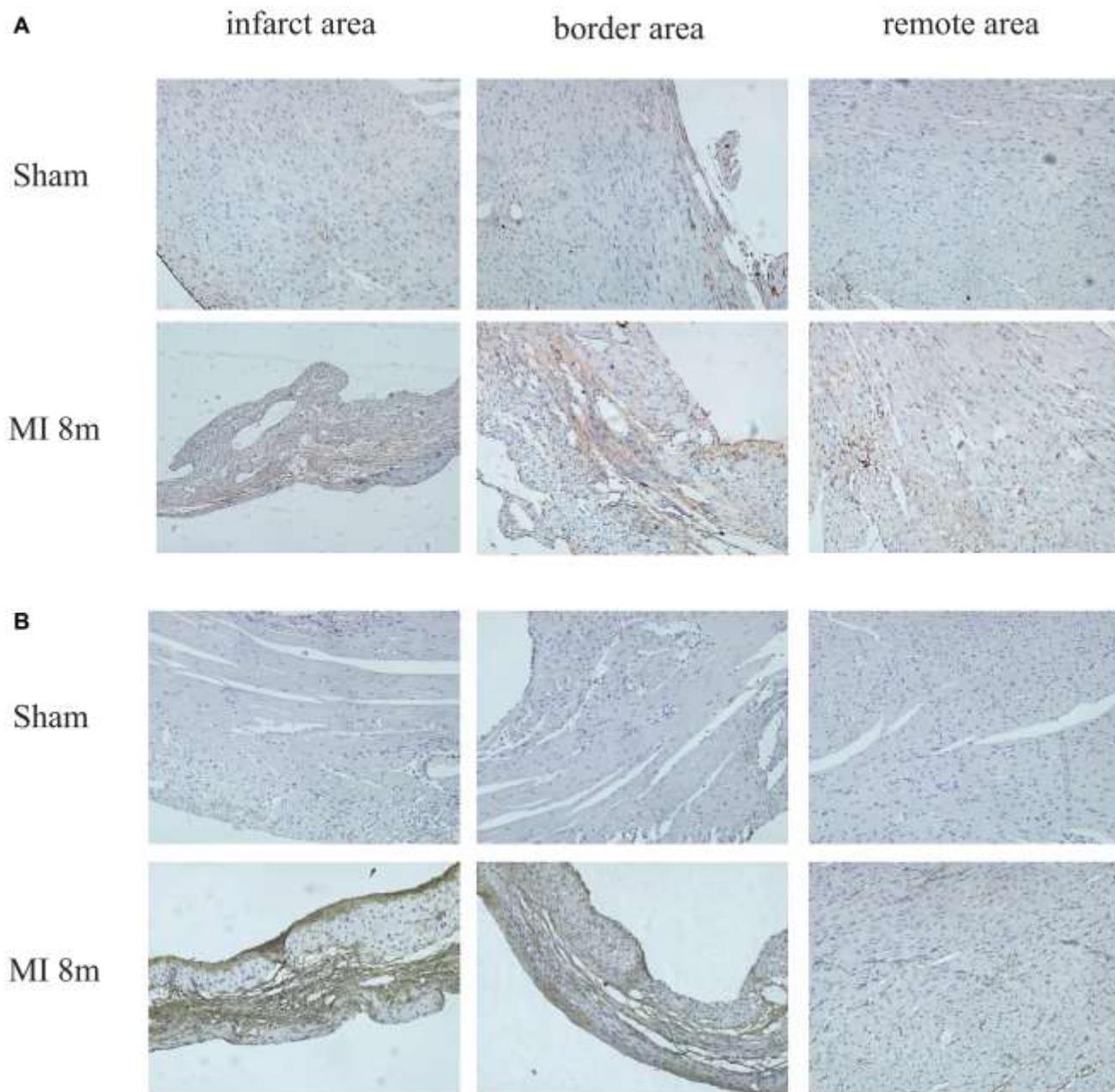
**Supplementary Figure 2. Downregulated pathways identified by GSEA analysis.** (A) Heatmap of the enriched genes in the fatty acid beta oxidation pathway. (B) Heatmap of the enriched genes in the glycolysis and gluconeogenesis pathway. (C) Heatmap of the enriched genes in the TCA cycle pathway.



**Supplementary Figure 3. Cardiac remodeling validated by detailed morphological and histological analysis. (A)** Representative longitudinal section pictures of heart stained with Masson's trichrome staining from 4 weeks after myocardial infarction (MI). **(B)** Representative longitudinal section pictures of heart stained with Masson's trichrome staining from 8 months after MI. Zoomed frames indicated the areas around the infarct sites after MI.



**Supplementary Figure 4. The liver weight in mice at 8 months after MI. (A)** The liver weight (mg) to body weight (g) ratio (LiW/BW). **(B)** The liver weight (mg) to tibia length (mm) ratio (LiW/TL). \* $P < 0.05$  vs. the corresponding time point in the sham group. # $P < 0.05$  compared with the prior time point in the MI group.



**Supplementary Figure 5. Representative immunohistochemical staining graphs in the hearts.** (A) Upper panel, immunohistochemical staining for  $\beta$ -catenin in different areas of the sham group hearts; Lower panel, immunohistochemical staining for  $\beta$ -catenin in different areas of the MI group hearts. (B) Upper panel, immunohistochemical staining for collagen-8 in different areas of the sham group hearts; Lower panel, immunohistochemical staining for collagen-8 in different areas of the MI group hearts. Left: infarct area; Middle: border area; Right: remote area.