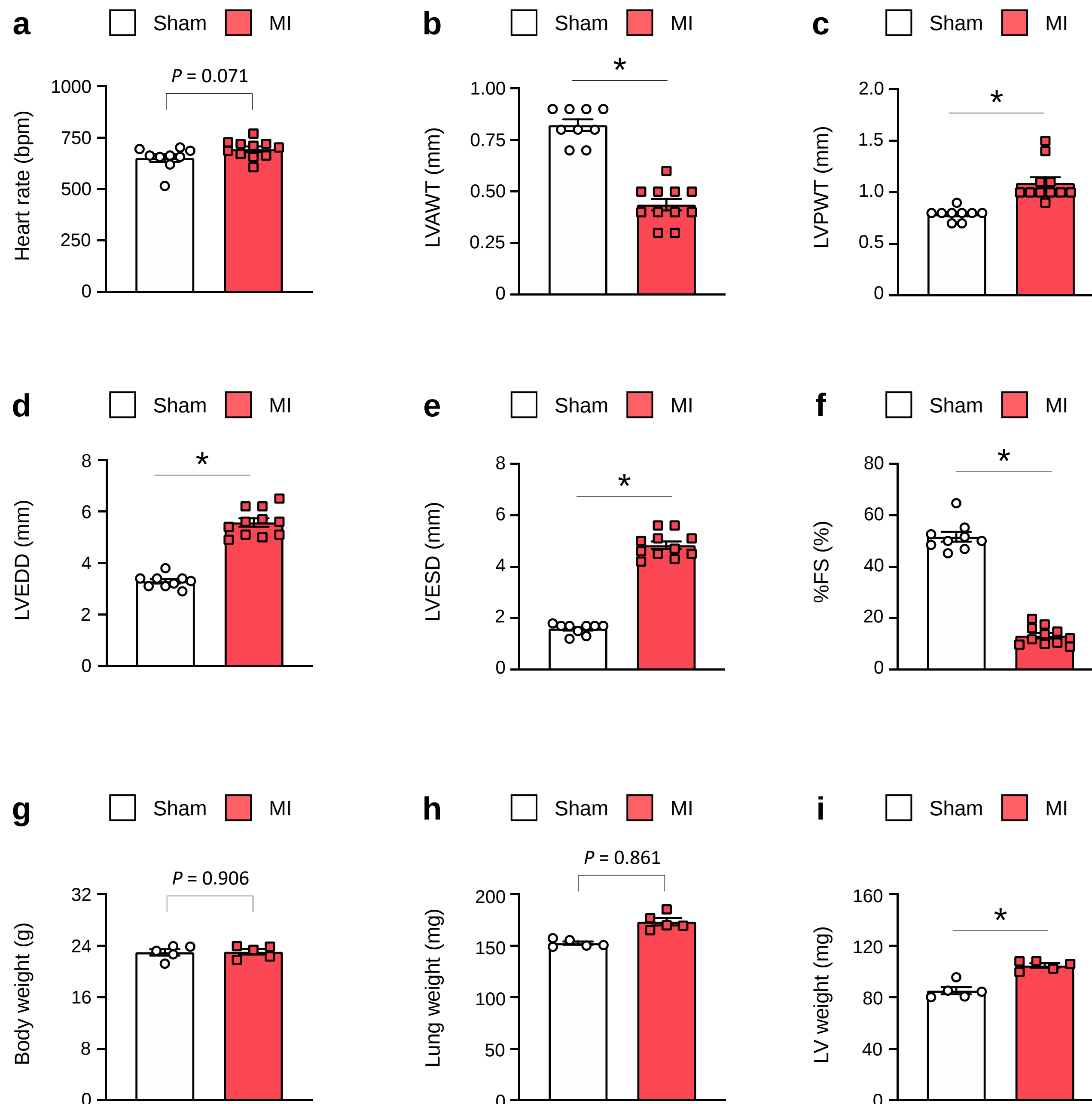
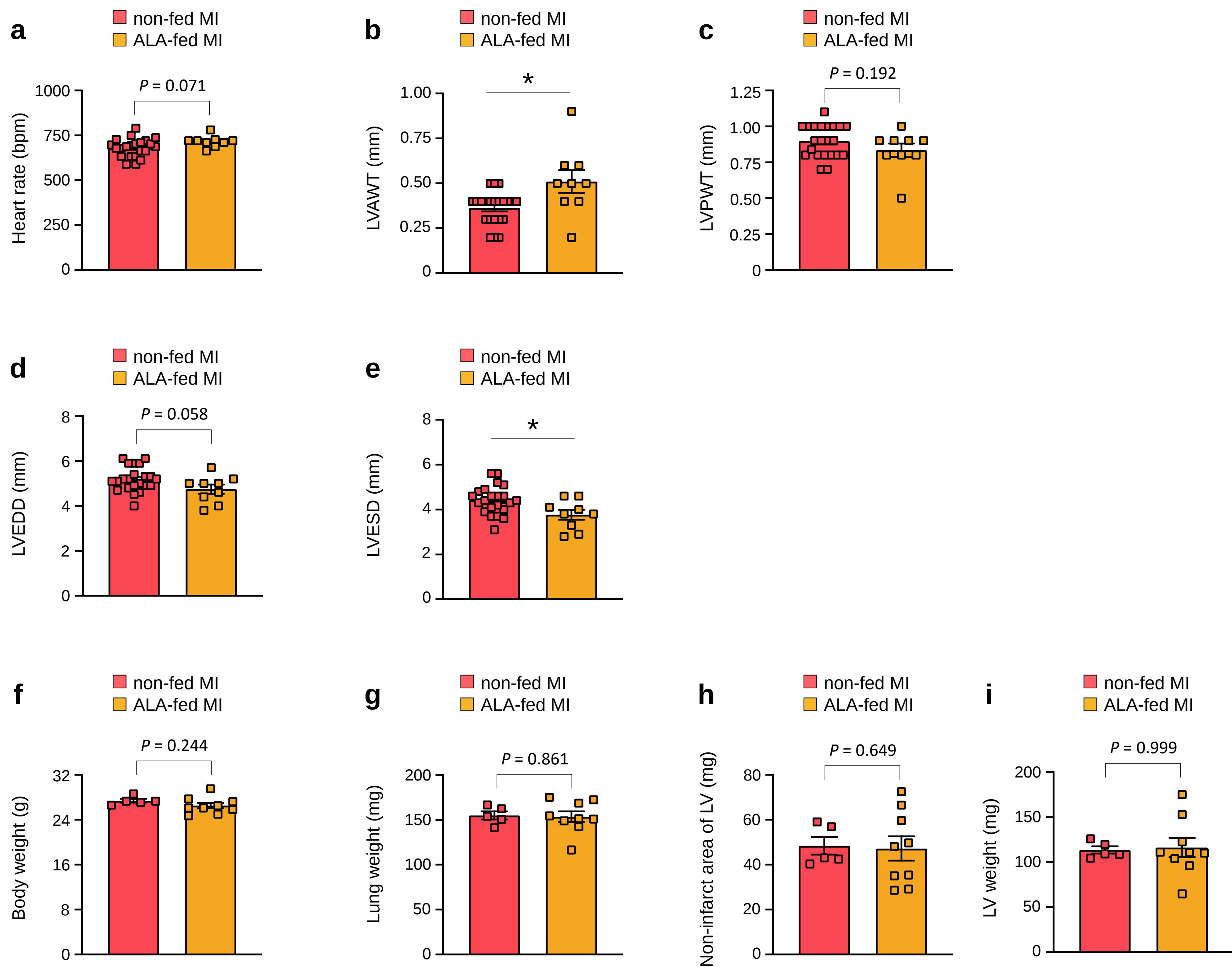
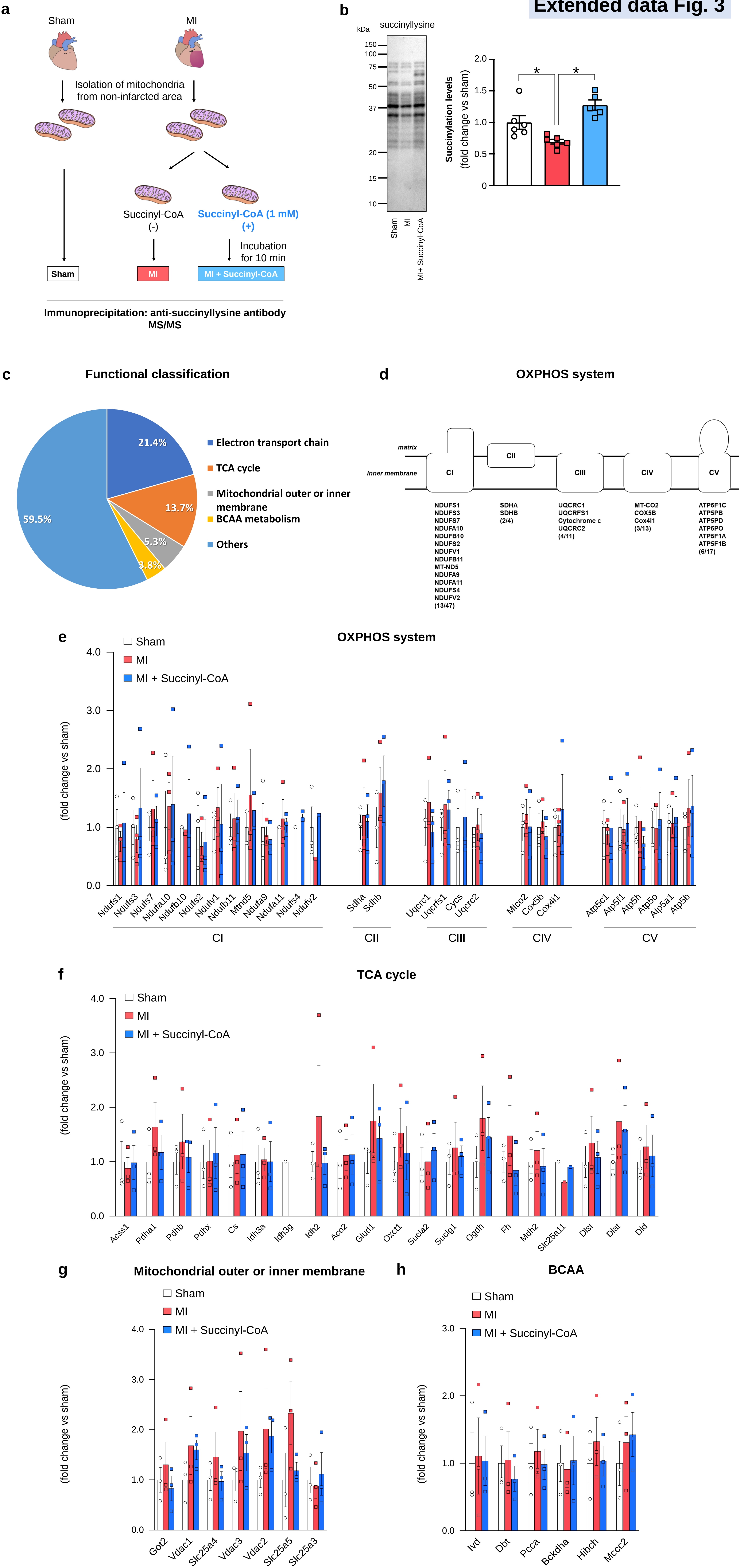


Extended data Fig. 1

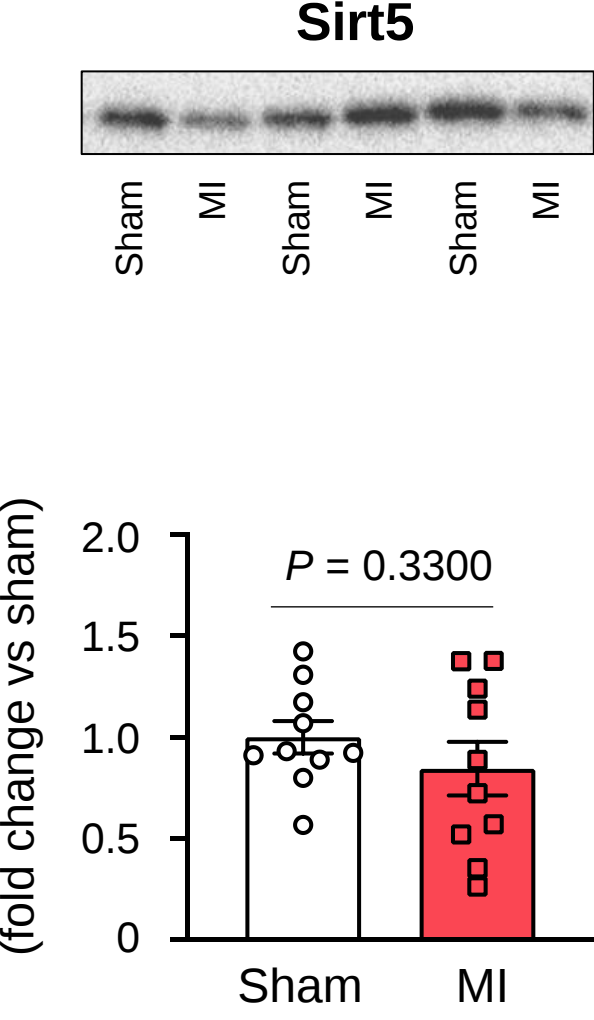


Extended data Fig. 2





Extended data Fig. 4



Extended data Fig. 5 (internal control)

Fig. 2b (Ogdh)

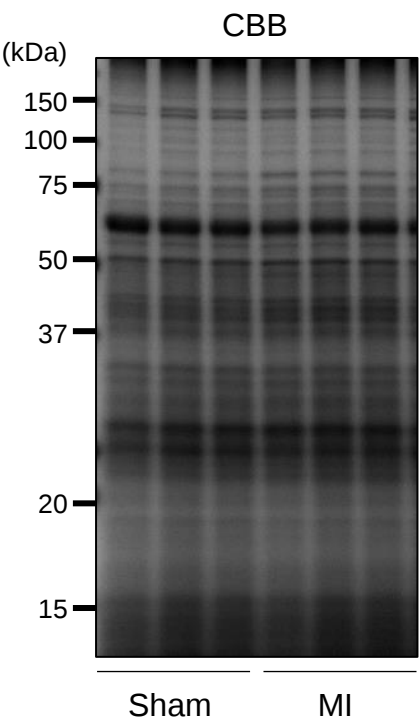


Fig. 2c (Glud1)

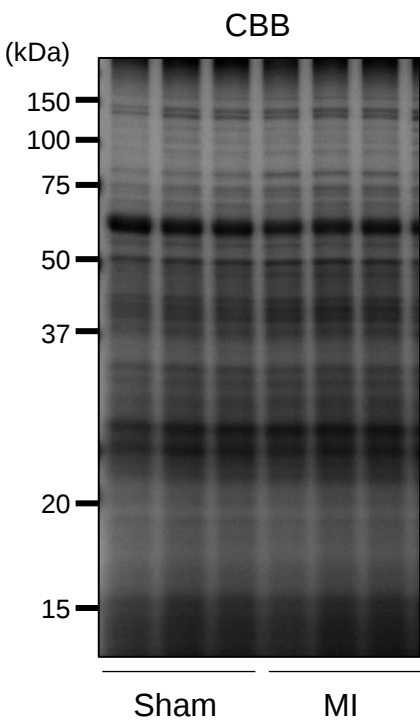


Fig. 2e,f (Pcca and Mcm)

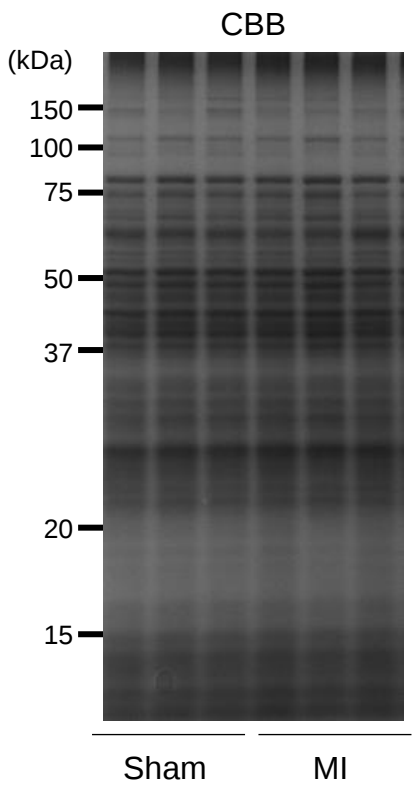


Fig. 2g (Suc1a2 and Suc1g1)

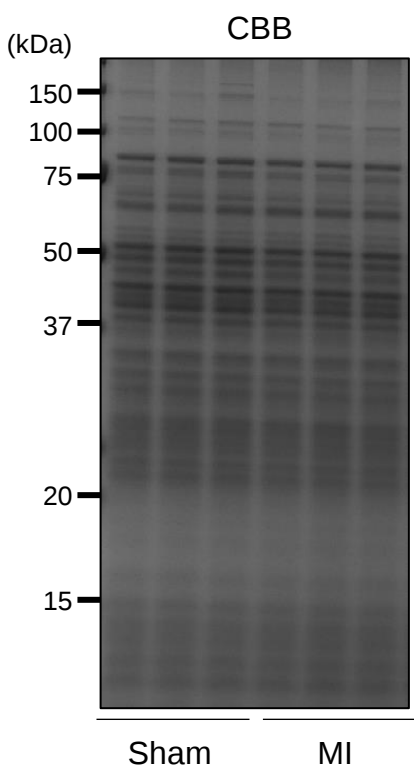


Fig. 2g (Suc1g2)

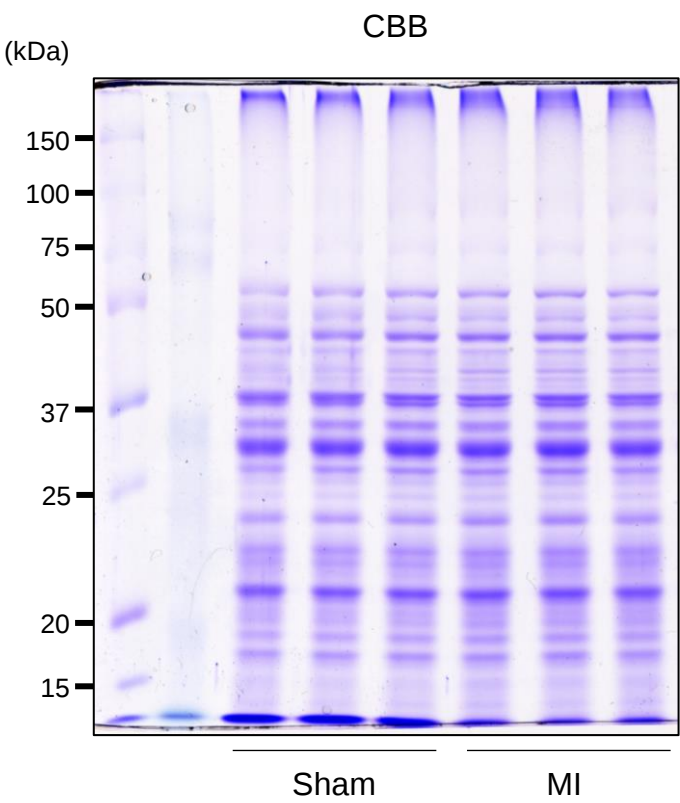


Fig. 2f (Alas1)

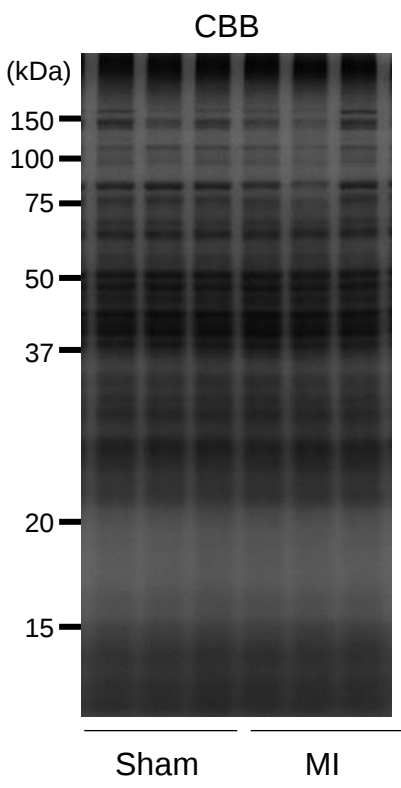
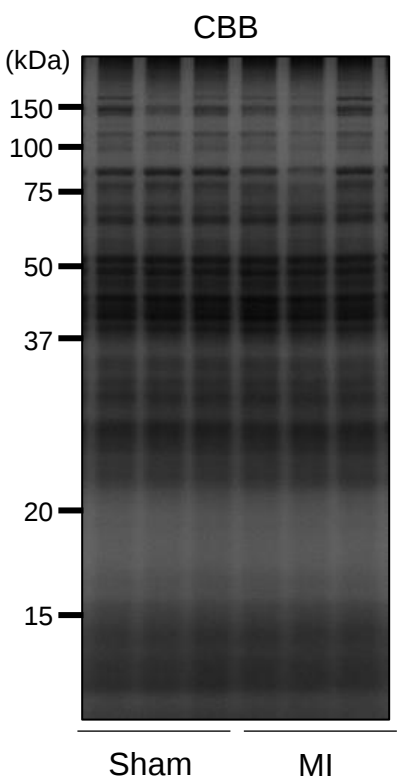
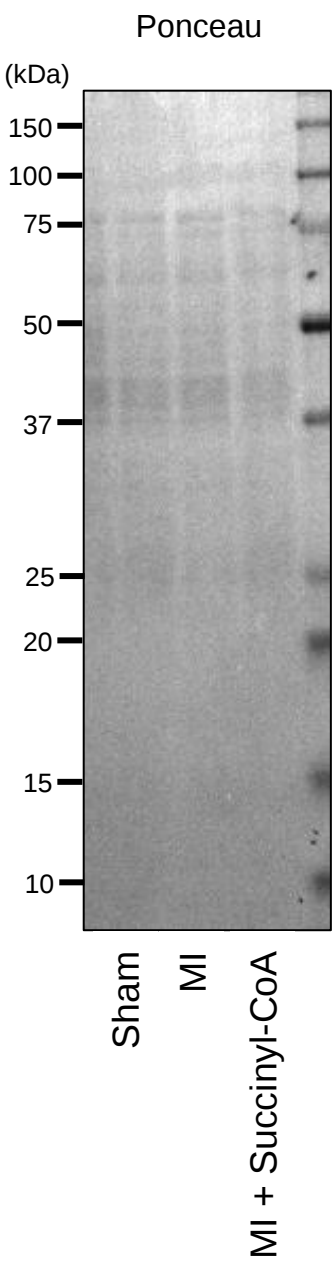


Fig. 2i (Oxct1)



Extended Fig. 3b (succinyllysine)



Extended Fig. 4 (Sirt5)

