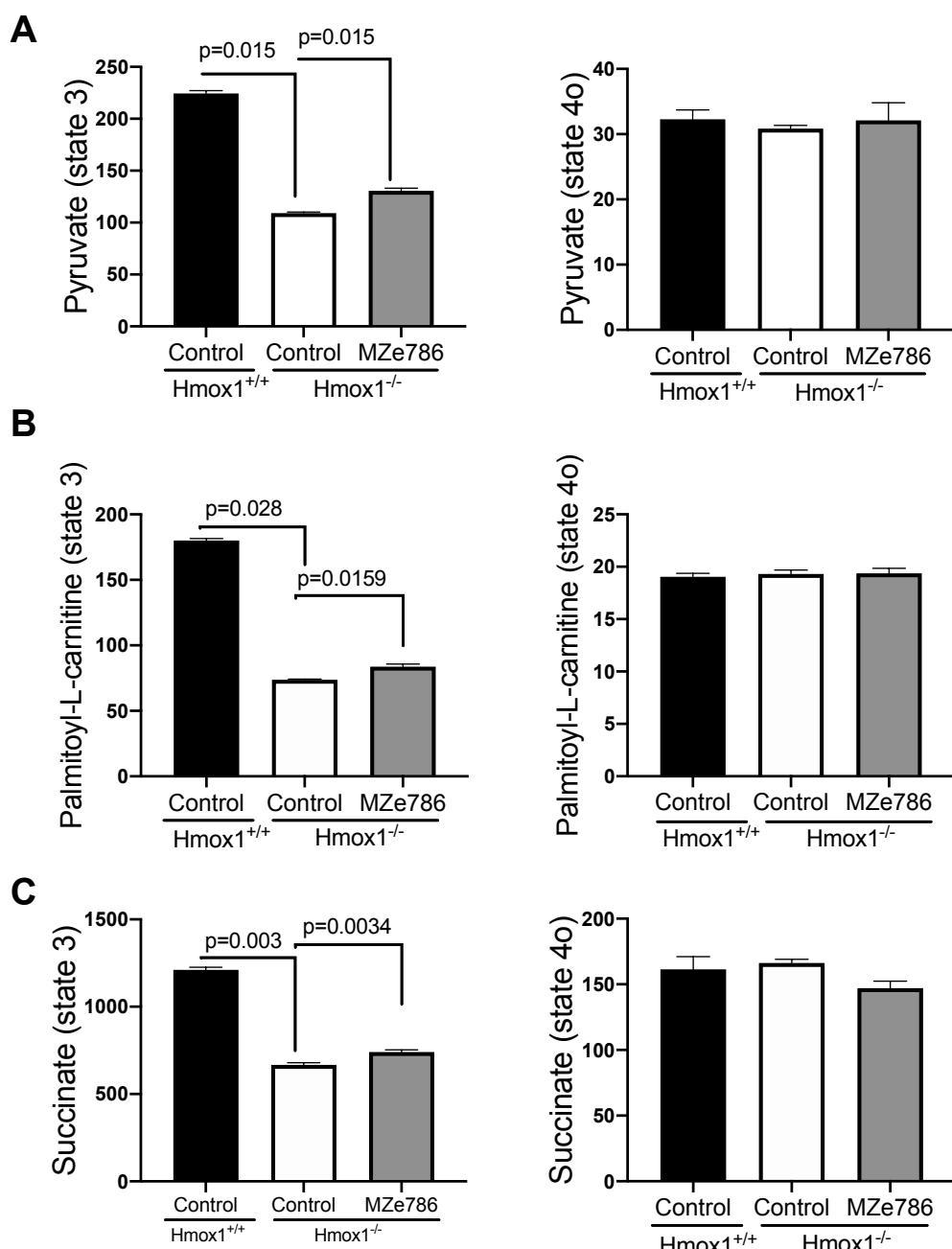
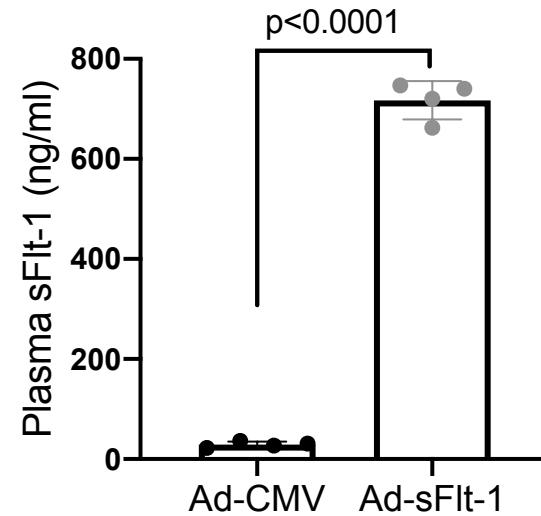


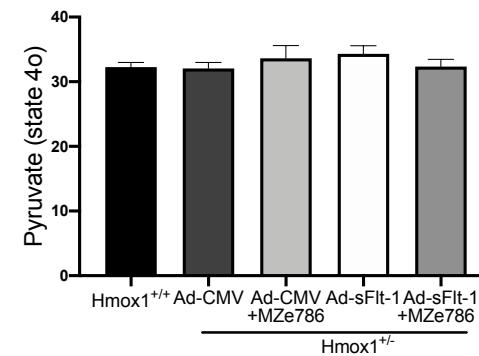
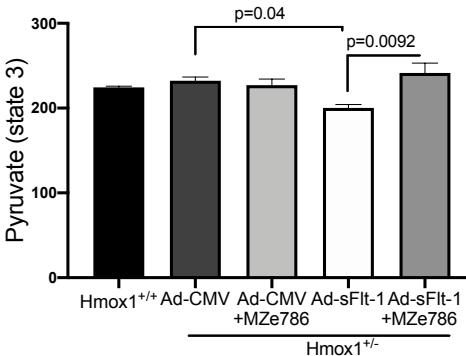
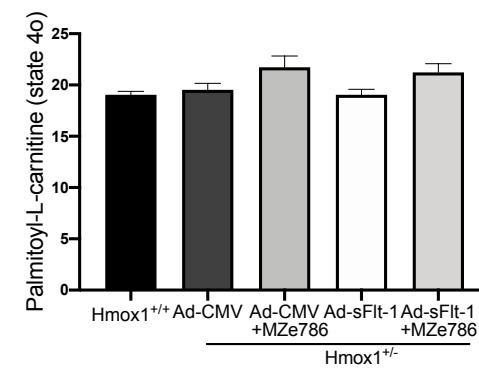
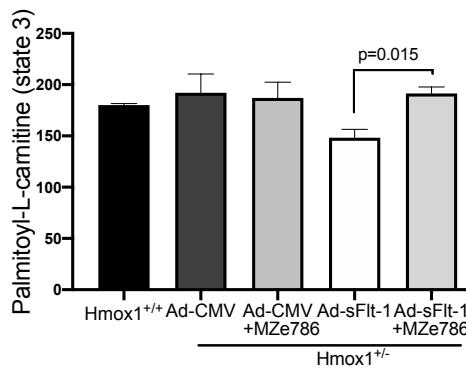
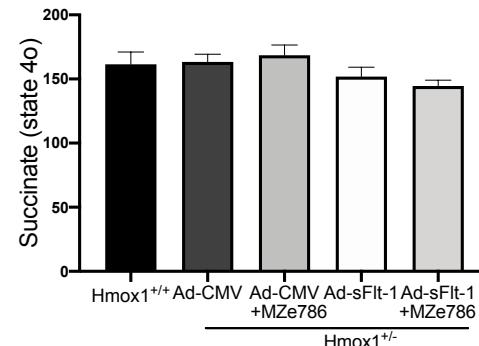
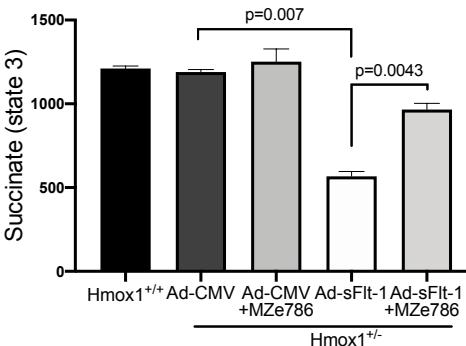
**Supplementary Figure 1.** Chemical structure of H<sub>2</sub>S releasing aspirin, MZe786 [2-acetoxybenzoic acid 4-(3-thioxo-3H-1,2-dithiol-5-yl)phenyl ester].



**Supplementary Figure 2. Respiration parameters from Hmox1 deficient mice.** Oxygen consumption rates representative of ADP-stimulated (state 3) and non-ADP-stimulated (state 4o) respiration in cardiac isolated mitochondria in response to substrates **(A)** pyruvate, **(B)** palmitoyl-L-carnitine and **(C)** succinate. n=4.



**Supplementary Figure 3 . Plasma level of sFlt-1 six days post-injection.** Hmox1<sup>+/−</sup> mice were injected with either Ad-CMV or Ad-sFlt-1 via tail-vein injection and the plasma level of sFlt-1 were measured by ELISA. Values are expressed as means ± SEM. Values in B are expressed as median and whiskers represent maximum and minimum values. n=4.

**A****B****C**

**Supplementary Figure 3. Respiration parameters from  $Hmox1^{+/-}$  mice.** Oxygen consumption rates representative of ADP-stimulated (state 3) and non-ADP-stimulated (state 4o) respiration in cardiac isolated mitochondria in response to substrates **(A)** pyruvate, **(B)** palmitoyl-L-carnitine and **(C)** succinate. n=4.