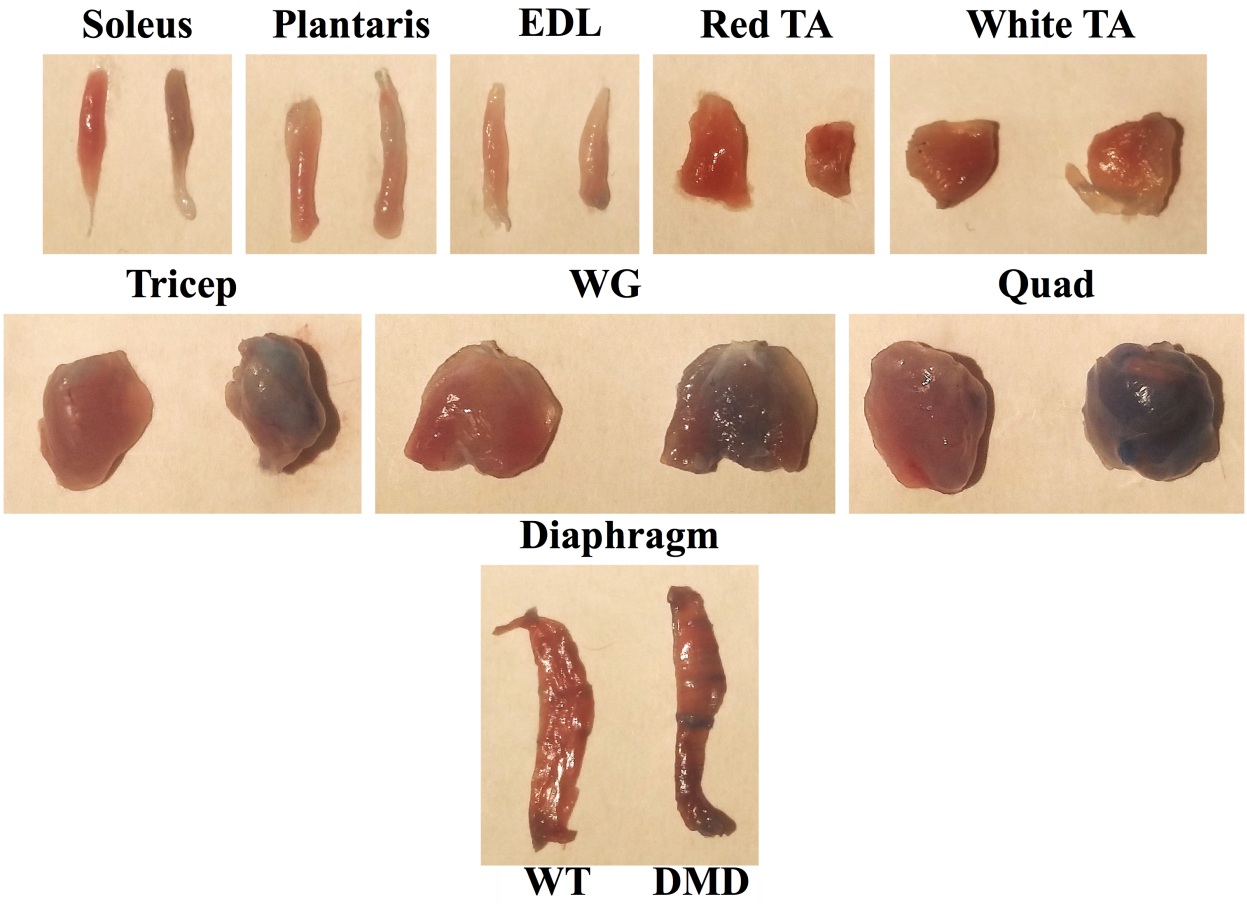
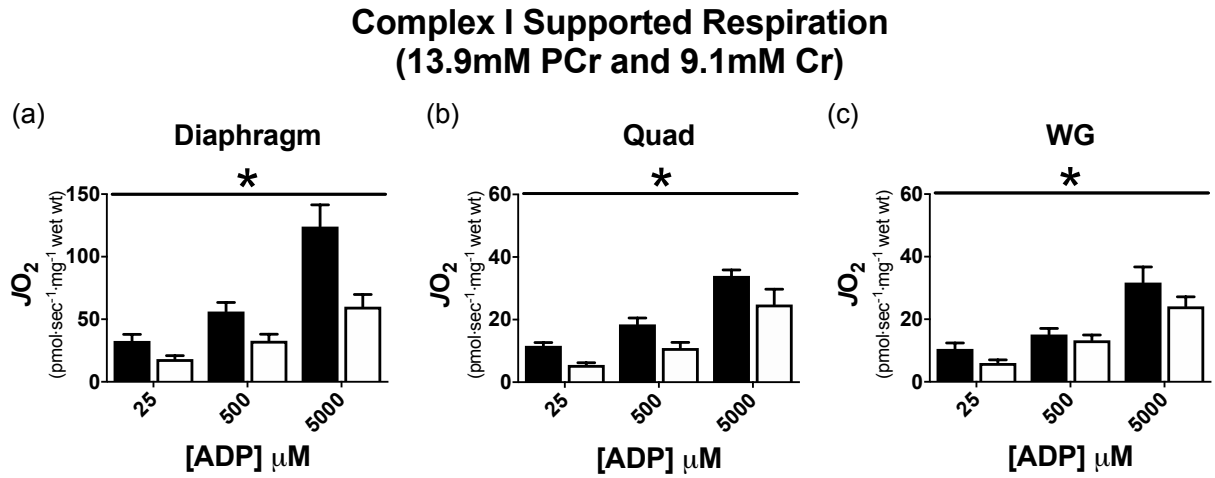
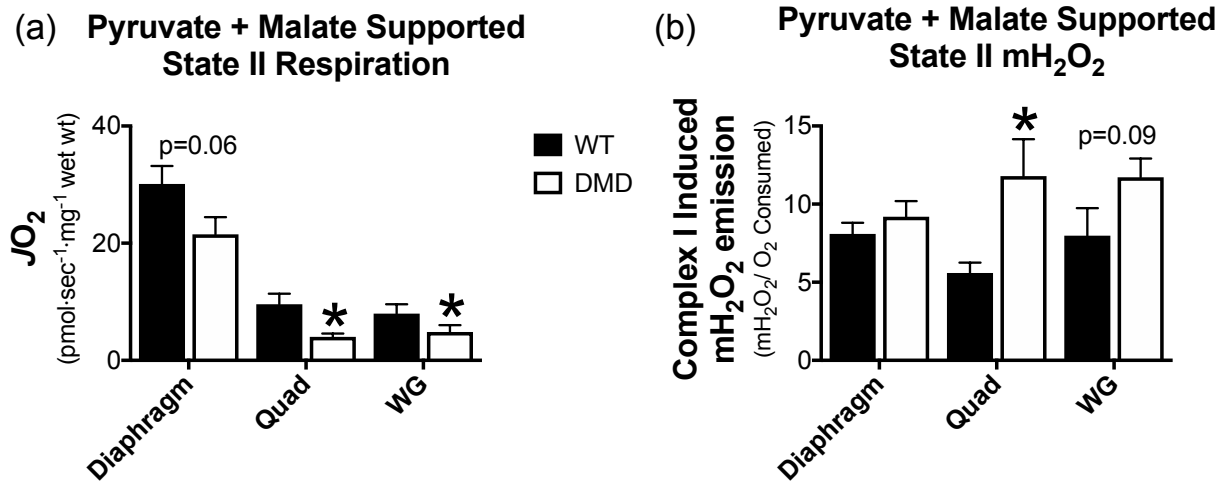


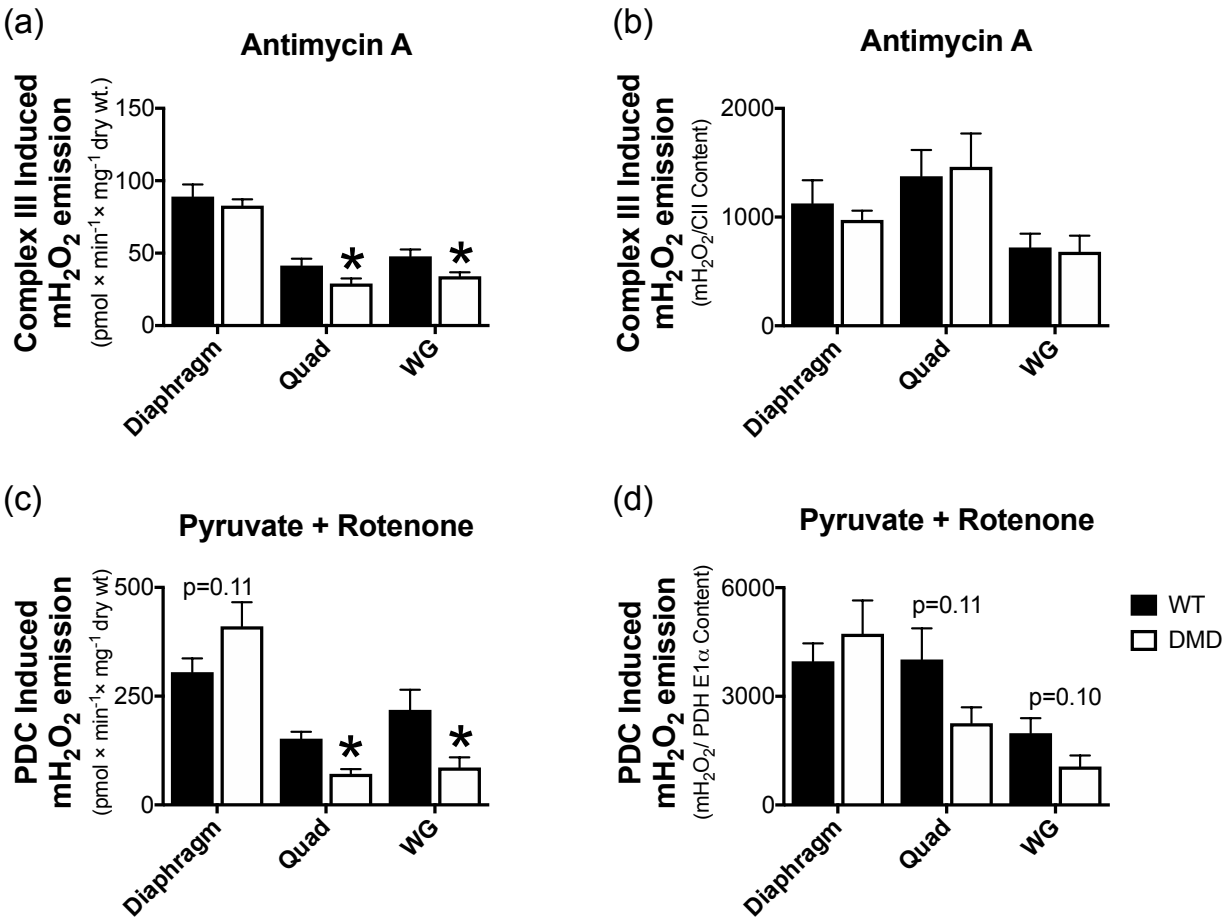
Supplementary Figure 1. Evaluation of sarcolemmal damage by Evans Blue Dye staining in DMD. Representative images of Evans Blue Dye staining in WT and DMD skeletal muscles 16 hours following an injection of 1% EBD solution at 5µl/g body weight.



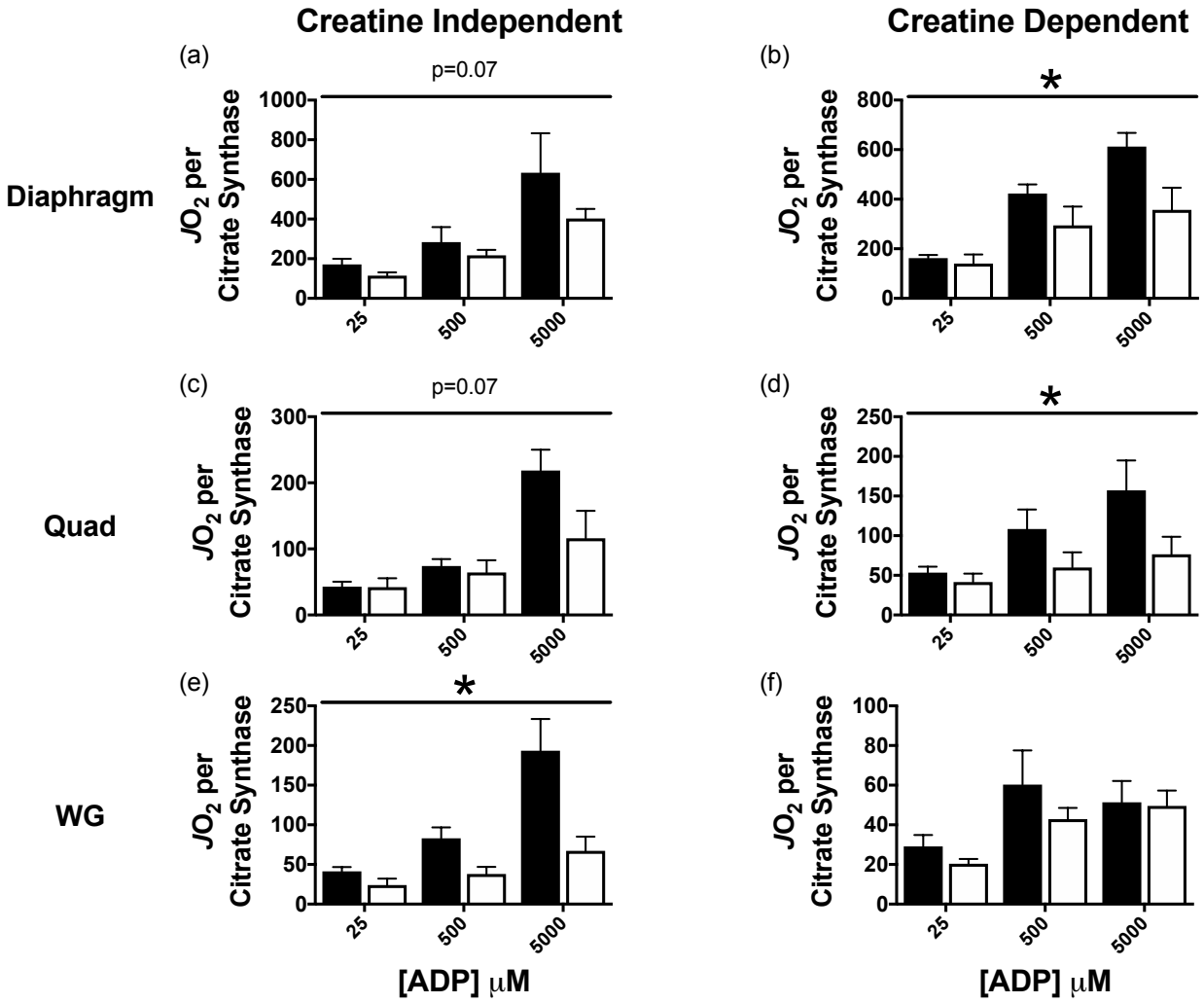
Supplementary Figure 2. ADP-stimulated respiration in the presence of phosphocreatine and creatine. 13.9mM phosphocreatine (PCr) and 9.1mM creatine (Cr) were added to the assay media to assess state III respiration supported by Complex-I substrates pyruvate (5mM) and malate (2mM) in Diaphragm **(A),** Quad **(B)** and WG **(C).** Results represent mean ± SEM; n=10-12; * $p<0.05$ compared to WT.



Supplementary Figure 3. Evaluation of state II respiration and mH_2O_2. State II (no ADP; proton leak) respiration **(A)** and mH_2O_2 emission **(B)** were initiated using Complex-I substrates pyruvate (5mM) and malate (2mM) in Diaphragm, Quad and WG muscles. Results represent mean ± SEM; n=10-12; * $p<0.05$ compared to WT.



Supplementary Figure 4. Additional sites of state II mH_2O_2 emission. Complex-III derived mH_2O_2 was assessed using Complex-III inhibitor antimycin A (2.5μM). Data was expressed per mg muscle weight **(A)** as well as normalized to Complex-III content **(B).** Pyruvate dehydrogenase complex (PDC) derived mH_2O_2 was assessed using pyruvate (10mM) and Complex-I inhibitor rotenone (0.5μM). Data was expressed per mg muscle weight **(C)** as well as normalized to PDH-E1α content **(D).** Results represent mean ± SEM; n=8-12; * $p<0.05$ compared to WT.



Supplementary Figure 5. Intrinsic Respiratory Capacity. State III respiration, supported by Complex-I substrates pyruvate (5mM) and malate (2mM), was assessed in the absence (Creatine Independent) and presence (Creatine Dependent) of 20mM creatine at physiological (25μM), sub-maximal (500μM) and maximal (5000μM) [ADP] and normalized to citrate synthase content. Assessments of bioenergetic function were completed in Diaphragm **(a-b),** Quad **(c-d)** and WG **(e-f)** muscles. Results represent means ± SEM; n=5-8; * $p<0.05$ compared to WT.