## Supplementary information

## Loss of microRNA-23-27-24 clusters in skeletal muscle is not influential in skeletal muscle development and exercise-induced muscle adaptation.

Minjung Lee<sup>1\*</sup>, Shogo Wada<sup>1\*</sup>, Satoshi Oikawa<sup>2</sup>, Katsuhiko Suzuki<sup>3</sup>, Takashi Ushida<sup>1</sup>, Takayuki Akimoto<sup>1,3</sup>

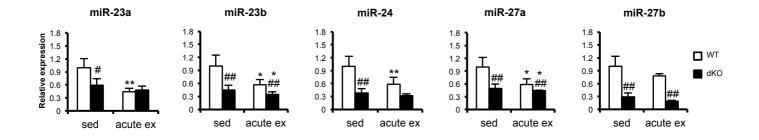
 <sup>1</sup> Division of Regenerative Medical Engineering, Center for Disease Biology and Integrative Medicine, Graduate School of Medicine, The University of Tokyo, Tokyo 113-0033, Japan
<sup>2</sup> Graduate School of Comprehensive Human Science, University of Tsukuba, Ibaraki

305-8571, Japan

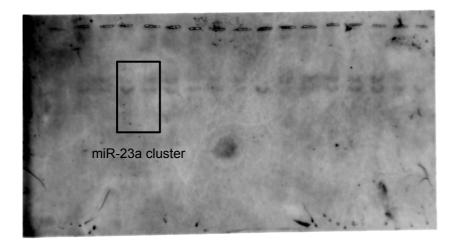
<sup>3</sup> Faculty of Sport Sciences, Waseda University, Saitama 359-1192, Japan

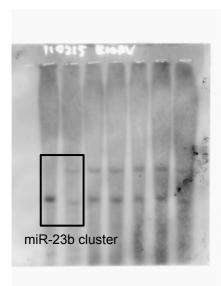
The current affiliation of S.W. is the Department of Medicine and Cardiovascular Institute, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA. \*: equal contributions

Correspondence and requests for materials should be addressed to T.A. (e-mail: axi@waseda.jp)

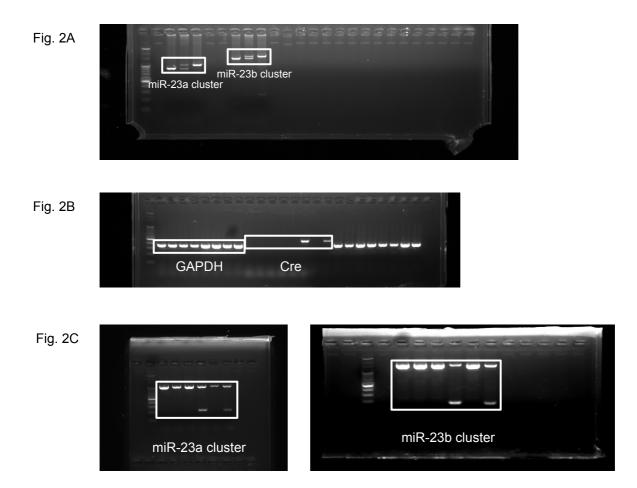


Supplementary Figure S1. Mature miRNAs in miR-23a/b clusters in skeletal muscle after an acute bout of wheel running. WT, wildtype. dKO, miR-23a/b clusters double KO. sed, sedentary group. acute ex, an acute bout of wheel running group. \*P < 0.05 and \*\*P < 0.01 compared with WT. \*P < 0.05 and \*\*P < 0.01 compared with sed. Data are means  $\pm$  SE (n = 3–5).

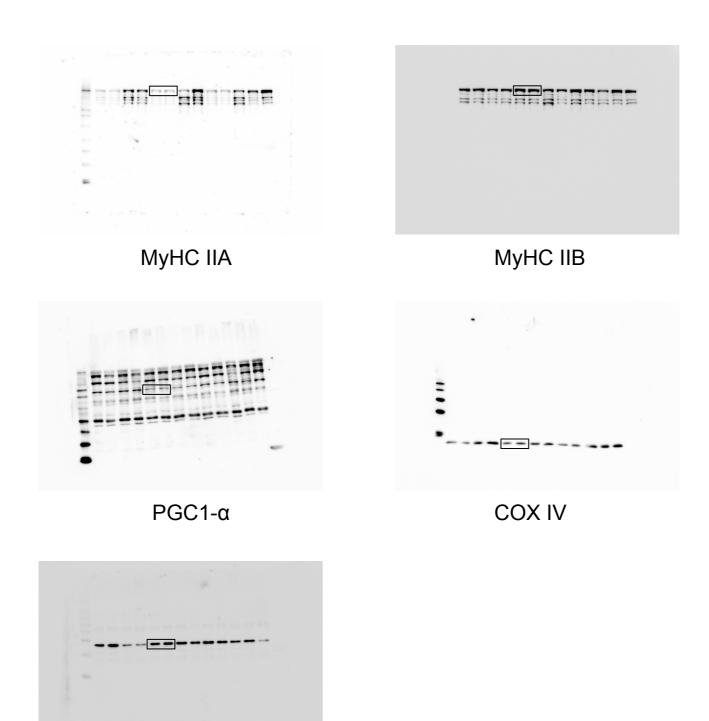




Supplementary Figure S2. Representative blot images displayed in Fig. 1B



Supplementary Figure S3. Representative gel images displayed in Fig. 2



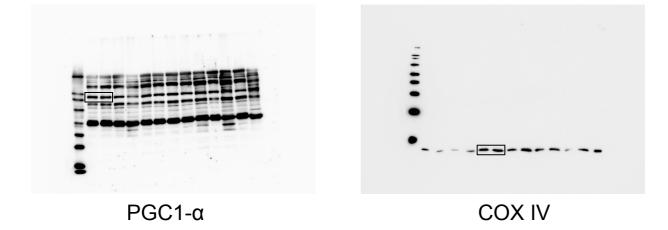
GAPDH

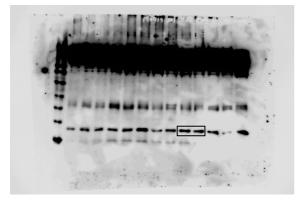
Supplementary Figure S4. Representative blot images displayed in Fig. 3A



MyHC I

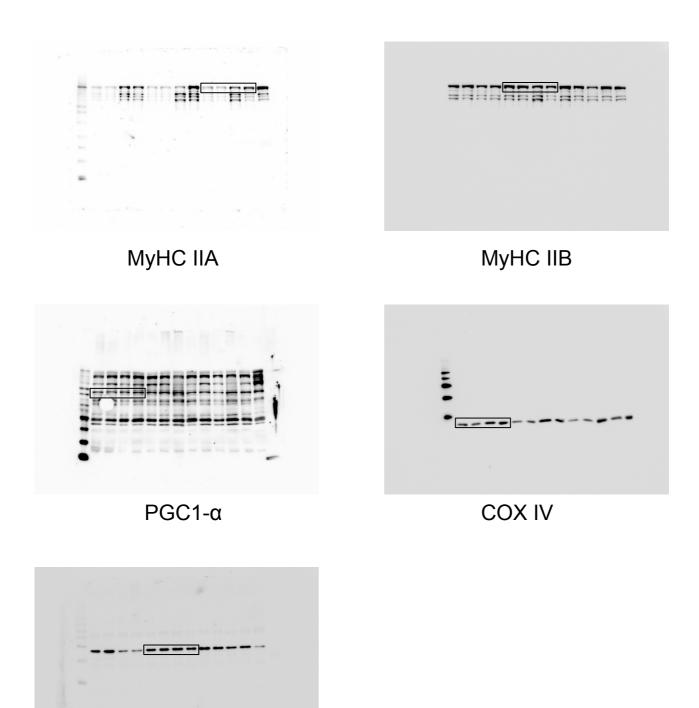
MyHC IIA





GAPDH

Supplementary Figure S5. Representative blot images displayed in Fig. 3C



GAPDH

Supplementary Figure S6. Representative blot images displayed in Fig. 5A