

Supplementary Information

Diphlorethohydroxycarmalol isolated from *Ishige okamurae* improves age-related muscle dysfunction by Ca²⁺-dependent response via SirT1/PGC-1 α pathway in *in vitro* and *in vivo*

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Figure S1: Chemical structure and purity characterization of DPHC.

Figure S2: DPHC regulated intracellular calcium ion (Ca^{2+}) levels in C2C12 cells.

Figure S3: Original Western blotting images presented in this study.

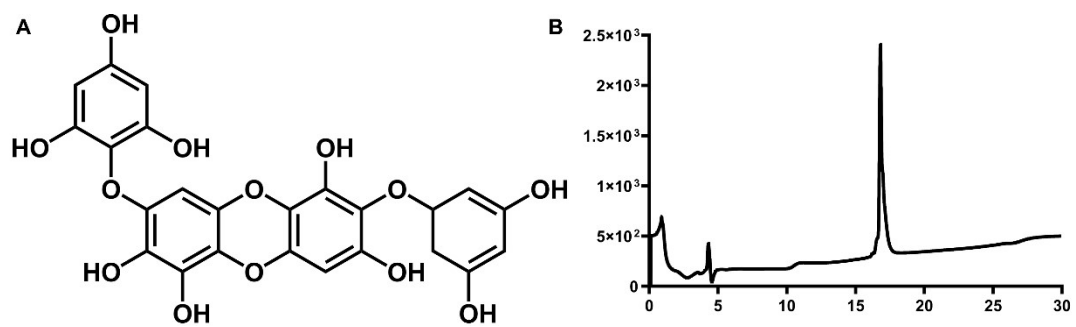


Figure S1: Chemical structure and purity characterization of DPHC. **(A)** Chemical structure of DPHC. **(B)** Purity analysis of DPHC was determined by chromatographic profiling.

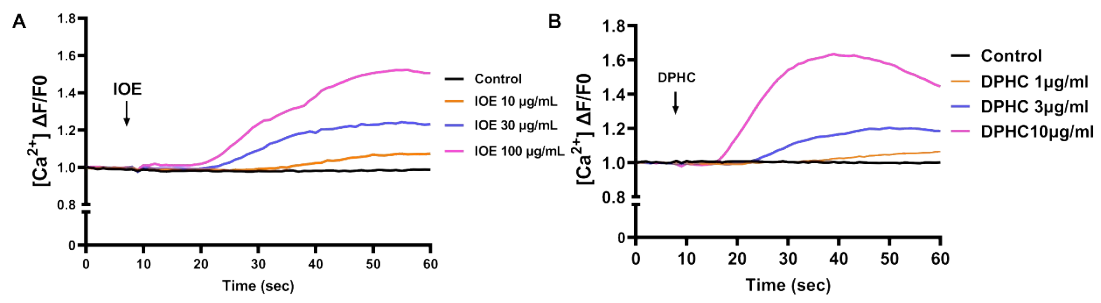
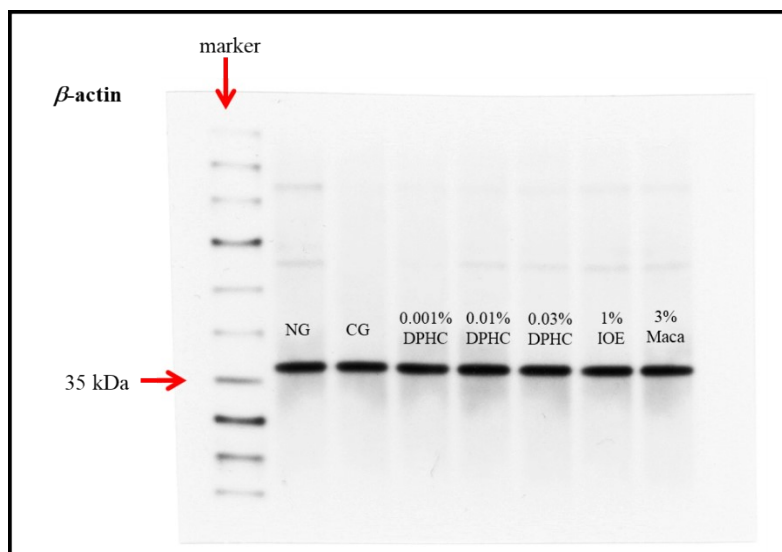
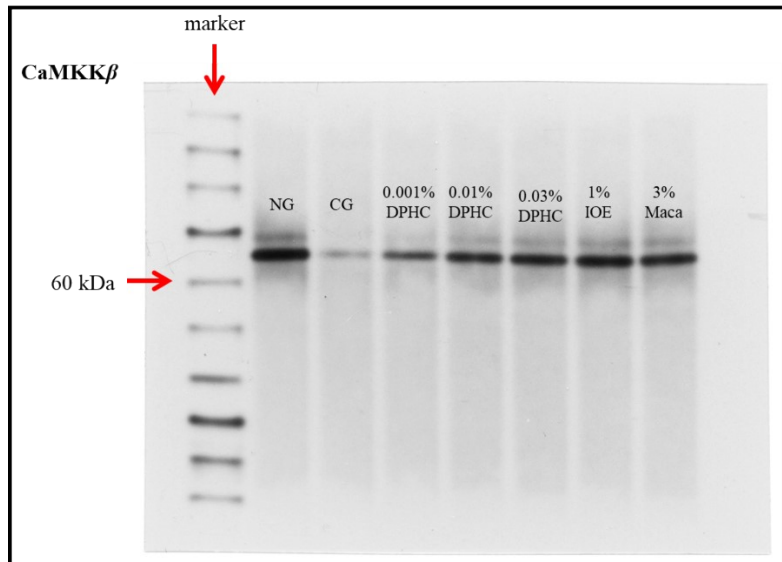
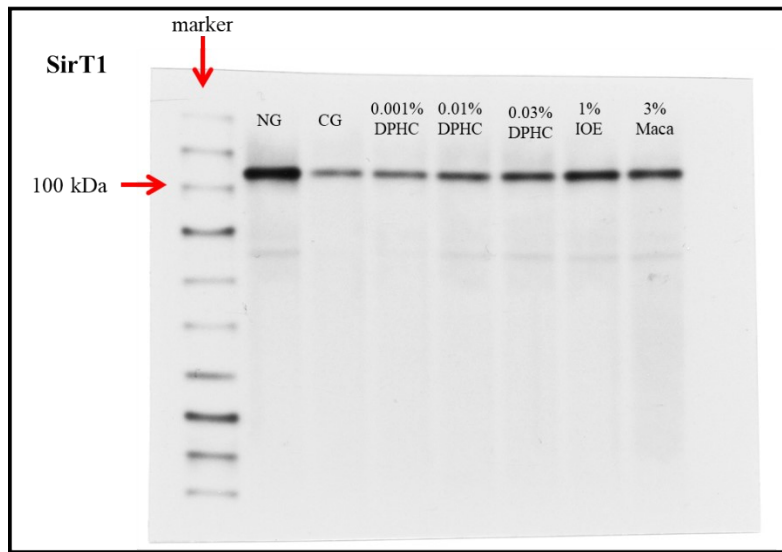


Figure S2: DPHC regulated intracellular calcium ion (Ca²⁺) levels in C2C12 cells. **(A)** Changes in intracellular Ca²⁺ levels after IOE treatment in C2C12 cells. **(B)** Changes in intracellular Ca²⁺ levels after DPHC treatment in C2C12 cells. All data were expressed as mean ± SEM (n = 3).

Figure S3: Original Western blotting images presented in this study.
Uncropped blots for Figure 5A



Uncropped blots for Figure 5D

