

SUPPLEMENTARY FILES

1. Supplementary Figures and Legends 1-5; Supplementary Methods; Supplementary Table 1.

Figures describe functional deficits in aged satellite cells, effects of MAP kinase inhibition and contain heat maps showing altered expression in aged satellite cells. Methods are provided.

Table provides IPA results.

2. Supplementary Video 1

SUPPLEMENTARY VIDEO 1: Phospho-p38 $\alpha\beta$ MAPK is asymmetrically localized across satellite cell. 3D rendering of a myofiber-associated satellite cell at 24 h post-isolation. DAPI (blue), Syndecan-4 (red) and phospho-p38 (green). Syndecan-4⁻ cell is a myonucleus.