

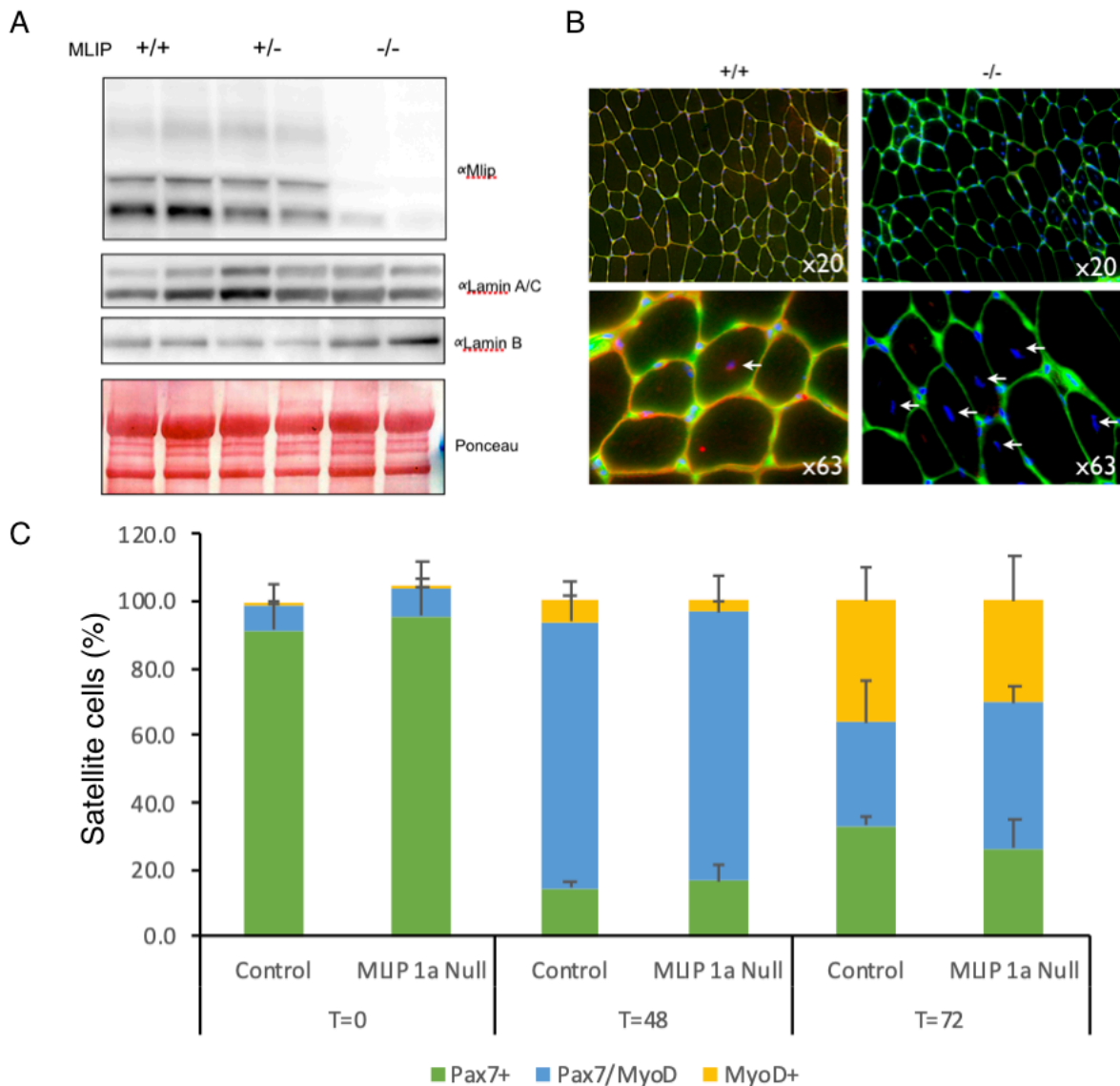
Supporting Table 1: Analysis of Satellite Cell (SC) proliferation and differentiation in single muscle fiber cultures in the presences and absents of MLIP exon 1a. Mean \pm StDev, (n).* Holm-Bonferroni.

Time in Culture (hrs)	Control, SC/fiber	Exon 1a Nulls, SC/fiber	p-value*
0	5.3 \pm 4.1 (179)	4.5 \pm 2.8 (187)	NS
48	12.2 \pm 6.7(134)	9.5 \pm 4.5 (112)	0.0033
72	21.4 \pm 10.1(110)	20.7 \pm 10.1	NS

Time in Culture (hrs)	Control, %Pax7 ⁺	Exon 1a Nulls, %Pax7 ⁺	p-value*
0	91.3 \pm 20.4 (173)	95.6 \pm 15.8 (183)	NS
48	14.6 \pm 12.7 (133)	16.6 \pm 14.8 (112)	NS
72	33.1 \pm 16 (110)	26.4 \pm 17.3 (119)	0.0173

Time in Culture (hrs)	Control, %Pax7+MyoD	Exon 1a Nulls, %Pax7+MyoD	p-value*
0	7.77 \pm 18.9 (173)	8.22 \pm 25.2 (183)	NS
48	79.2 \pm 16.7 (133)	80.4 \pm 15.6 (112)	NS
72	30.7 \pm 18 (110)	43.3 \pm 21.7 (119)	2.66x10 ⁻⁵

Time in Culture (hrs)	Control, %MyoD ⁺	Exon 1a Nulls, %MyoD ⁺	p-value*
0	0.35 \pm 2.62 (173)	0.11 \pm 1.48 (183)	NS
48	6.19 \pm 10.5 (133)	2.98 \pm 5.64 (112)	NS
72	36.2 \pm 18.3 (110)	30.3 \pm 16 (119)	0.0006



Supporting Figure 1: Increased prevalence of centralized nuclei in skeletal muscle fibers of mice lacking MLIP exon1a.

A. Loss of Mlip protein expression in skeletal muscle isolated from MLIP^{-/-} mice. Equal total protein (70ug/well) was resolved by SDS-PAGE with specific proteins (MLIP, Lamin A/C and Lamin were detected by western analysis. B. Hind leg muscles of 8 week old mice of Wildtype (+/+) and MLIP^{-/-} genotype. B. MLIP null skeletal muscle exhibited increased prevalence of Centralized nuclei. 91 WT fibers had 3 centralized nuclei (White arrow) (3.3%) as compared to 82 MLIP null fibers having 19 centralized nuclei, 23.2%. MLIP (red), wheatgerm agglutinin (green), DAPI (Blue). C. Quantification of the number of satellite cell's expressing early fate decision markers, Pax7 and/or MyoD on single muscle fibers in culture, expressed as a percentage of the total number of SCs (>30 fibers per treatment per mouse; n = 4 mice).