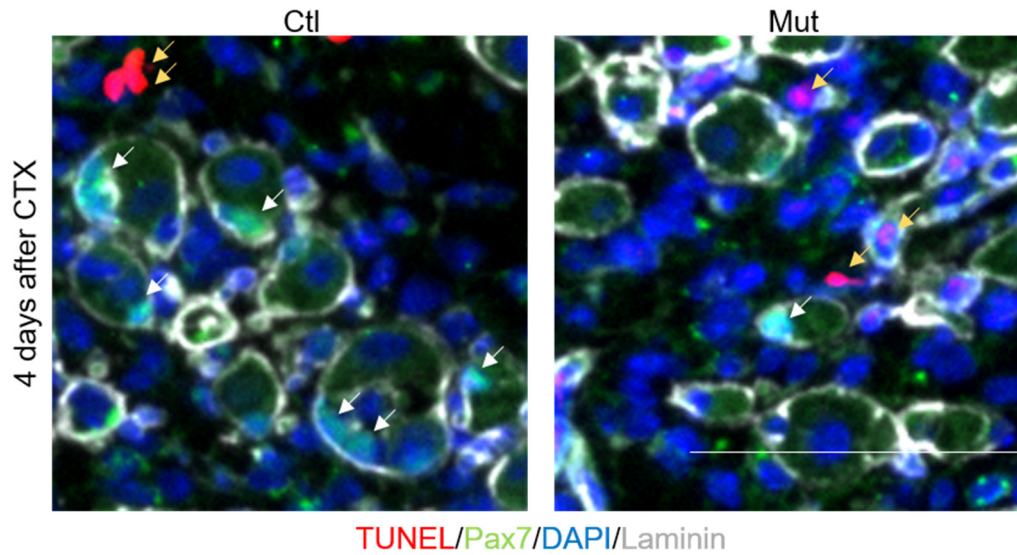
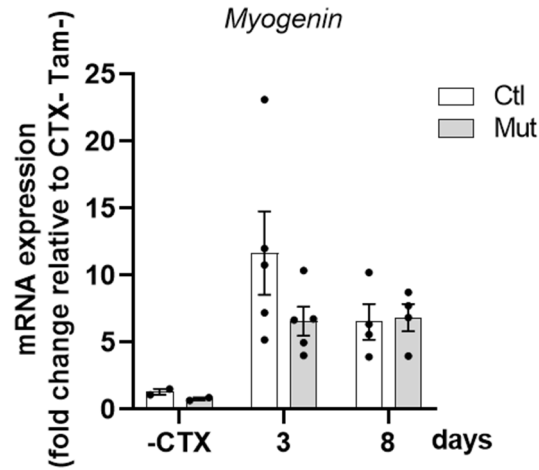


**Figure S1.** RhoA loss within SCs does not affect mice body weight. Body weight of Tam injected or not mice before, four, eight, fourteen and thirty days after CTX injection (n=2-8).



**Figure S2.** Reduced number of SCs in RhoA-deleted muscle is not due to their aberrant apoptosis. Representative image of *TA* muscle section of Tam or not injected mice immunostained for Pax7 (green), laminin (gray), TUNEL (red) and nuclear staining with DAPI four days after CTX injection. Scale bar 100 $\mu$ m.

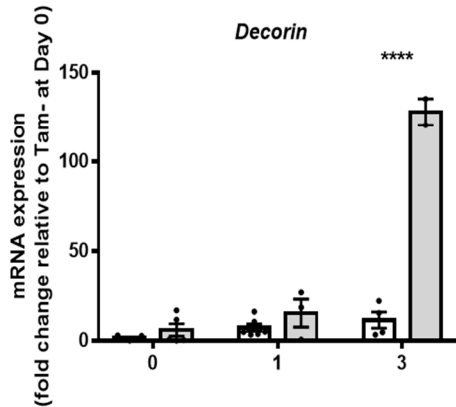


**Figure S3.** Adult muscle differentiation is not impaired with SCs RhoA deleted Analysis of *Myogenin* mRNA expression by RT-qPCR in Tam injected or not mice before, three and eight days after CTX injection (n=2-5).

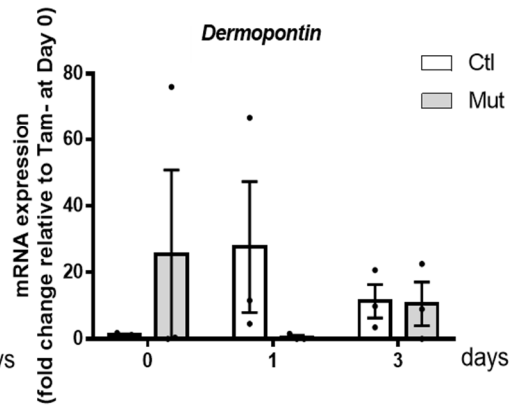
**A**

Symbol	Day0		Day1		Day3	
	Expr p-value	Expr Fold Change	Expr p-value	Expr Fold Change	Expr p-value	Expr Fold Change
<i>Chrd</i>	3,22E-02	-1,38	4,04E-02	-1,357	4,08E-02	-1,356
<i>Olfir881</i>	2,59E-02	-1,102	3,30E-03	-1,15	4,81E-02	-1,088
<i>C920021L13Rik</i>	1,55E-02	1,256	4,23E-02	1,202	2,53E-02	1,23
<i>Ccdc180</i>	1,08E-02	1,298	3,55E-02	1,227	4,49E-02	1,214
<i>Dhrs2</i>	1,88E-02	1,193	2,54E-02	1,18	2,48E-02	1,181
<i>Fate1</i>	1,03E-03	1,26	5,98E-03	1,196	4,92E-03	1,203
<i>Rsl1 (includes others)</i>	1,76E-02	1,371	2,81E-02	1,332	9,15E-03	1,428
<i>Pear1</i>	1,87E-02	1,363	8,17E-03	1,434	1,49E-02	1,382
<i>Esco1</i>	3,73E-02	2,015	2,61E-02	2,135	2,21E-02	2,194
<i>Gsdmc</i>	1,70E-02	1,289	1,14E-03	-1,239	3,69E-03	-1,199
<i>Ifna4</i>	1,16E-02	1,216	1,60E-02	1,615	1,66E-02	-1,198
<i>Il12rb1</i>	1,23E-02	1,151	2,09E-02	-1,135	3,28E-02	1,122
<i>Il1rb3</i>	1,07E-02	1,201	4,27E-02	-1,148	6,24E-03	-1,223
<i>Vmn1r192 (includes others)</i>	3,38E-03	-1,179	5,02E-03	1,229	1,83E-03	-1,137
<i>Vmn2r32 (includes others)</i>	1,32E-02	1,555	2,62E-02	1,289	1,42E-02	-1,33
<i>Adam20</i>	2,16E-02	-1,206	2,87E-02	-1,106	1,74E-02	1,118
<i>A1987944 (includes others)</i>	8,46E-04	-1,447	3,57E-02	-1,955	2,63E-02	1,666

**B**



**C**



**Figure S4.** The absence of RhoA in SCs affects some expression genes. **(A)** Top 17 genes identified by IPA whose expression is RhoA dependent and is deregulated in all the differentiation state. **(B)** Analysis of *Decorin* (*Dcn*) and **(C)** *Dermopontin* (*Dpn*) mRNA expression by RT-qPCR in FACS-sorted SCs control or RhoA-deleted, cultured in rich medium (Day 0) or 1 (Day 1) and 3 (Day 3) after differentiation. Data were normalized by *Hmbs* expression and relative to Tam- at Day 0 (n=2-6). Means  $\pm$  SEM \*\*\*\*  $P < 0.0001$  (ordinary two-way ANOVA with Sidak's test).