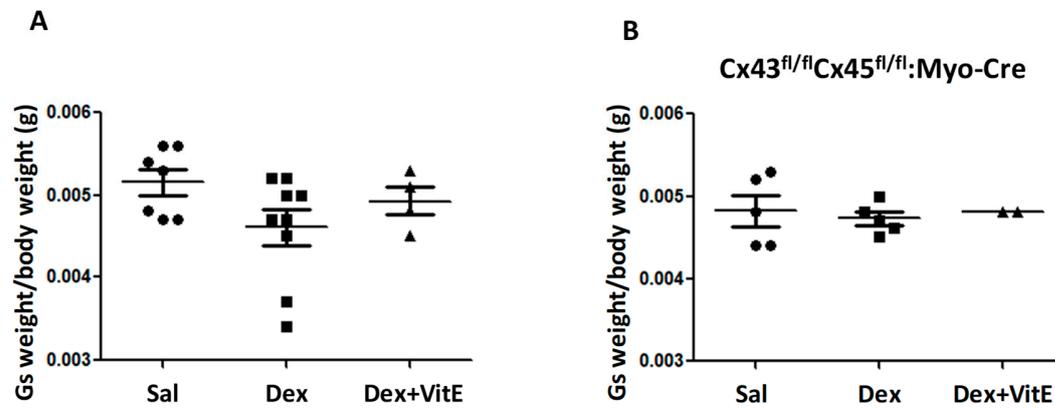
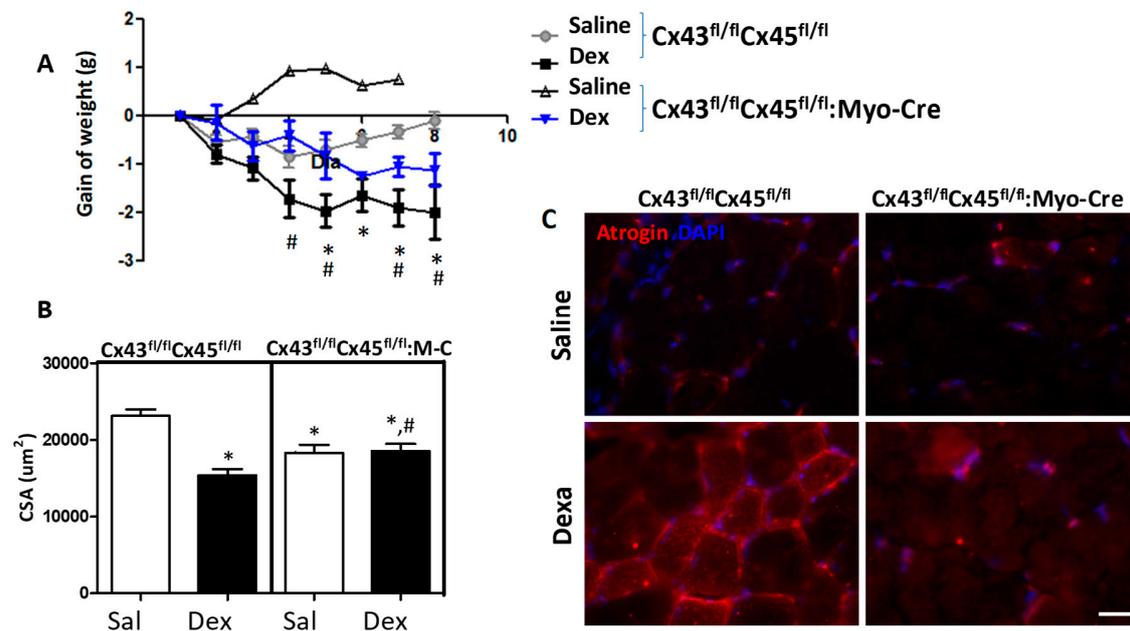


Supplementary material



Supplementary Figure 1: Muscle weight of wild type but not Cx43/Cx45 expression deficient mice is reduced by dexamethasone. Wild type and Cx43^{fl/fl}Cx45^{fl/fl}:Myo-Cre mice were treated daily during 7 days with saline (Sal) or dexamethasone (10 mg/kg Dex) or Dex 10 mg/day and fed with Vitamin E supplemented diet (Dex + VitE). At the end of the experiment mice were euthanized and body and gastrocnemius (Gs) weight was recorded. **(A)** Gs weight per body weight ratio from wild type mice. Saline = Sal; Dexamethasone = Dex; vitamin E; VitE (n sal=7; Dex=9; Dex+VitE=4). **(B)** Gs weight per body weight ratio from Cx43^{fl/fl}Cx45^{fl/fl}:Myo-Cre mice deficient in expression of Cx43 and Cx45 specifically in myofibers. (n sal=5; Dex=5; Dex+VitE=2).



Supplementary Figure 2: Cx43/Cx45 expression deficient mice are resistant to weight loss and muscle atrophy induced by dexamethasone. Cx43^{fl/fl}Cx45^{fl/fl} and Cx43^{fl/fl}Cx45^{fl/fl}:Myo-Cre mice were daily treated for 7 days with saline (Sal) or dexamethasone (Dex, 10 mg/kg Dex). **(A)** The mice weight was recorded daily. The graph shows the loss of weight relative to the start of treatment. (For Cx43^{fl/fl}Cx45^{fl/fl} n Saline: 5; n Dex: 6 and for Cx43^{fl/fl}Cx45^{fl/fl}:Myo-Cre n Saline: 6; n Dex: 9). Significance was assessed by two-way ANOVA followed by Bonferroni post hoc test. * p<0.05 for Saline vs Dex Cx43^{fl/fl}Cx45^{fl/fl} mice; # p<0.05 Saline Cx43^{fl/fl}Cx45^{fl/fl} vs Dex Cx43^{fl/fl}Cx45^{fl/fl}:Myo-Cre **(B)** The cross-sectional area (CSA) of myofibers of tibialis anterior muscles was measured by off-line analysis of hematoxylin-eosin images. Five images of each muscle section were evaluated (n=3 for all groups).. The results are expressed as mean ± SEM. * p<0.05 different from saline Cx43^{fl/fl}Cx45^{fl/fl} mice; # p<0.05 different from Dex Cx43^{fl/fl}Cx45^{fl/fl} mice **(C)** The presence and cellular distribution of the protein-degradation marker Atrogin-1 (Red) was evaluated by immunofluorescence assay in cross sections of TA muscles. (n=3 for all groups). Scale bar: 50 μm.