



## A Neuron-Specific Protein Found in Skeletal Muscle: New Frontiers for Gap-43

By Raffaele Pilla

DISSERTATION.COM, United States, 2012. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.Growth Associated Protein 43 (GAP-43), isolated from rat brain and considered a neuronal marker, is involved in neurite branching, cytoskeleton remodelling, neuronal development and protection. However, GAP-43 mRNA was found in embryonic chicken cells positive to meromyosin, as well as in human satellite cells, myoblasts and myotubes deriving from healthy or dystrophic muscles. Despite these findings, there is no clear evidence about its localization or relationship with other muscle proteins. The aim of this study was to investigate GAP-43 protein expression and localization in C2C12 cells and mice skeletal muscle fibers, using immunoblot and immunofluorescence protocols for confocal mycroscopy. Immunoblot analyses show the presence of GAP-43 in C2C12 cell homogenates as well as in mature muscle fibers. Immunofluorescent images reveal that the protein is localized nearby the external nuclear membranes in C2C12 myoblasts, while in C2C12 myotubes, it has been detected on muscular streaks, in a regular double strand pattern. This localization has been found also in Extensor Digitorum Longus fibers isolated from 1 week, 1 and 24 months old mice. In isolated adult mouse fibers, GAP-43 localization...



## Reviews

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