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## SEMCAP3 Rabbit pAb

Catalog Number: bs-9191R

Target Protein: SEMCAP3

Concentration: 1mg/ml

Form: Liquid

Host: Rabbit

Clonality: Polyclonal

Isotype: IgG

Applications: IHC-P (1:100-500), IHC-F (1:100-500), IF (1:50-200), ELISA (1:5000-10000)

Reactivity: (predicted:Human, Mouse, Rat, Rabbit, Sheep, Cow, Horse)

Predicted MW: 120 kDa

Subcellular Cytoplasm

Locations:

Entrez Gene: 23024

Swiss Prot: Q9UPQ7

Source: KLH conjugated synthetic peptide derived from human SEMCAP3/LNX3: 951-1066/1066.

Purification: affinity purified by Protein A

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

**Background:** PDZRN3 contains a RING-finger motif in its N-terminal region, two PDZ domains in its central region and a consensus-binding motif for PDZ domains at its C-terminus. It was identified in silico as a homolog of the protein known as LNX1 or SEMCAP1, which possesses ubiquitin ligase activity and binds the membrane protein Semaphorin 4C. However, PDZRN3 itself has not previously been characterized. We have now evaluated the properties and functions of PDZRN3. The PDZRN3 gene was shown to be expressed in various human tissues including the heart, skeletal muscle and liver and its expression in mouse skeletal muscle was developmentally regulated. Both the differentiation of C2C12 mouse skeletal myoblasts into myotubes and injury-induced muscle regeneration in vivo were found to be accompanied by up-regulation of PDZRN3. The differentiation-associated increase in the expression of PDZRN3 in C2C12 cells follows that of myogenin and precedes that of myosin heavy chain. Depletion of PDZRN3 by RNA interference inhibited the formation of myotubes as well as the associated up-regulation of myosin heavy chain in C2C12 cells. Our data suggest that PDZRN3 plays an essential role in the differentiation of myoblasts into myotubes by acting either downstream or independently of myogenin.