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Anti-Caldesmon Picoband Antibody

Catalog # ABO12607

Product Information

Application	WB, IHC-P
Primary Accession	Q05682
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Caldesmon(CALD1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	800
Other Names	Caldesmon, CDM, CALD1, CAD, CDM
Calculated MW	93231
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	Cytoplasm, cytoskeleton . Cytoplasm, myofibril . On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle). .
Tissue Specificity	High-molecular-weight caldesmon (isoform 1) is predominantly expressed in smooth muscles, whereas low-molecular- weight caldesmon (isoforms 2, 3, 4 and 5) are widely distributed in non-muscle tissues and cells. Not expressed in skeletal muscle or heart.
Source	Eukaryota
Protein Name	Caldesmon
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E. coli-derived human Caldesmon recombinant protein (Position: M1-E120). Human Caldesmon shares 87.6% amino acid (aa) sequence identity with rat Caldesmon.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

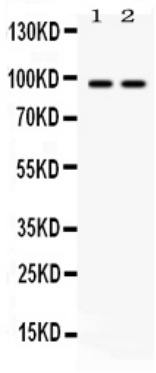
Name	CALD1
Synonyms	CAD, CDM
Function	Actin- and myosin-binding protein implicated in the regulation of actomyosin interactions in smooth muscle and nonmuscle cells (could act as a bridge between myosin and actin filaments). Stimulates actin binding of tropomyosin which increases the stabilization of actin filament structure. In muscle tissues, inhibits the actomyosin ATPase by binding to F-actin. This inhibition is attenuated by calcium-calmodulin and is potentiated by tropomyosin. Interacts with actin, myosin, two molecules of tropomyosin and with calmodulin. Also plays an essential role during cellular mitosis and receptor capping. Involved in Schwann cell migration during peripheral nerve regeneration (By similarity).
Cellular Location	Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P13505}. Cytoplasm, myofibril {ECO:0000250|UniProtKB:P13505}. Cytoplasm, cytoskeleton, stress fiber {ECO:0000250|UniProtKB:P13505}. Note=On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle) {ECO:0000250|UniProtKB:P13505}
Tissue Location	High-molecular-weight caldesmon (isoform 1) is predominantly expressed in smooth muscles, whereas low-molecular-weight caldesmon (isoforms 2, 3, 4 and 5) are widely distributed in non-muscle tissues and cells. Not expressed in skeletal muscle or heart

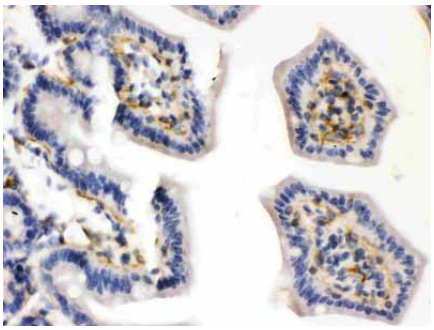
Background

Caldesmon is a protein that in humans is encoded by the CALD1 gene. It is mapped to 7q33. This gene encodes a calmodulin- and actin-binding protein that plays an essential role in the regulation of smooth muscle and nonmuscle contraction. The conserved domain of this protein possesses the binding activities to Ca(2+)-calmodulin, actin, tropomyosin, myosin, and phospholipids. This protein is a potent inhibitor of the actin-tropomyosin activated myosin MgATPase, and serves as a mediating factor for Ca(2+)-dependent inhibition of smooth muscle contraction. Alternative splicing of this gene results in multiple transcript variants encoding distinct isoforms.

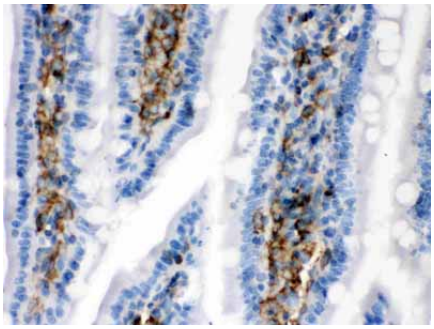
Images

Western blot analysis of Caldesmon expression in rat skeletal muscle extract (lane 1) and HELA whole cell lysates (lane 2). Caldesmon at 93KD was detected using rabbit anti- Caldesmon Antigen Affinity purified polyclonal antibody (Catalog # ABO12607) at 0.5 □¼g/mL. The blot was developed using chemiluminescence (ECL) method .

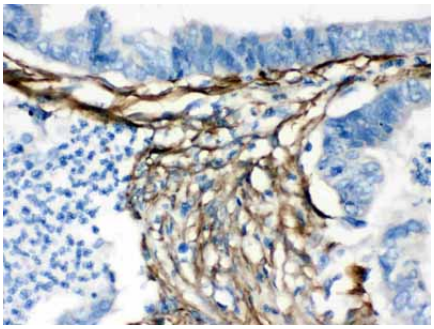




Caldesmon was detected in paraffin-embedded sections of mouse intestine tissues using rabbit anti- Caldesmon Antigen Affinity purified polyclonal antibody (Catalog # ABO12607) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .



Caldesmon was detected in paraffin-embedded sections of rat intestine tissues using rabbit anti- Caldesmon Antigen Affinity purified polyclonal antibody (Catalog # ABO12607) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .



Caldesmon was detected in paraffin-embedded sections of human intestinal tissues using rabbit anti- Caldesmon Antigen Affinity purified polyclonal antibody (Catalog # ABO12607) at 1 ??g/mL. The immunohistochemical section was developed using SABC method .