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Caldesmon antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22429a

Product Information

Application	WB, E
Primary Accession	Q05682
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit Ig
Clone Names	R03777
Calculated MW	93231

Additional Information

Gene ID	800
Other Names	Caldesmon, CDM, CALD1, CAD, CDM
Target/Specificity	This antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between amino acids from human.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Caldesmon antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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

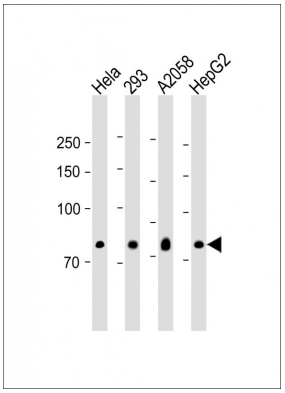
Background

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).

References

Novy R.E.,et al.J. Biol. Chem. 266:16917-16924(1991).
Humphrey M.B.,et al.Gene 112:197-204(1992).
Hayashi K.,et al.Proc. Natl. Acad. Sci. U.S.A. 89:12122-12126(1992).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Hillier L.W.,et al.Nature 424:157-164(2003).

Images



All lanes: Anti-Caldesmon antibody at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: 293 whole cell lysate Lane 3: A2058 whole cell lysate Lane 4: HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 80 KDa Blocking/Dilution buffer: 5% NFDM/TBST.