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CALD1 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP6609c

Specification

CALD1 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q05682

CALD1 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 800

Other Names
Caldesmon, CDM, CALD1, CAD, CDM

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6609c was selected from the Center region of human CALD1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CALD1 Antibody (Center) Blocking Peptide - 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

CALD1 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CALD1 Antibody (Center) Blocking Peptide - Images

CALD1 Antibody (Center) Blocking Peptide - Background

CALD1 is 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.

CALD1 Antibody (Center) Blocking Peptide - References

Yoshio,T., FEBS Lett. 581 (20), 3777-3782 (2007)Mani,R.S., Biochemistry 31 (47), 11896-11901 (1992)