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CALD1 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6609c

Specification

CALD1 Antibody (Center) - Product Information

Application	**IHC-P, FC, WB,E**
Primary Accession	Q05682
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**93231**
Antigen Region	**428-457**

CALD1 Antibody (Center) - Additional Information

Gene ID 800

Other Names
Caldesmon, CDM, CALD1, CAD, CDM

Target/Specificity
This CALD1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 428-457 amino acids from the Central region of human CALD1.

Dilution
IHC-P~~1:10~50
FC~~1:10~50
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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
CALD1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

CALD1 Antibody (Center) - 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}

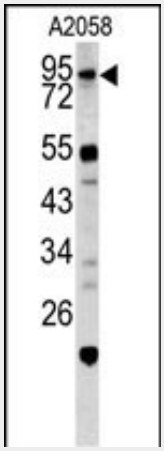
Tissue Location
High-molecular-weight caldesmon (isoform 1) is predominantly expressed in smooth muscles, whereas low-molecular-weight caldesmon (isoforms 2, 3, 4 and 5) are widely distributed in non-muscle tissues and cells. Not expressed in skeletal muscle or heart

CALD1 Antibody (Center) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CALD1 Antibody (Center) - Images



Western blot analysis of CALD1 antibody (Center) (Cat. #AP6609c) in A2058 cell line lysates (35ug/lane). CALD1 (arrow) was detected using the purified Pab.

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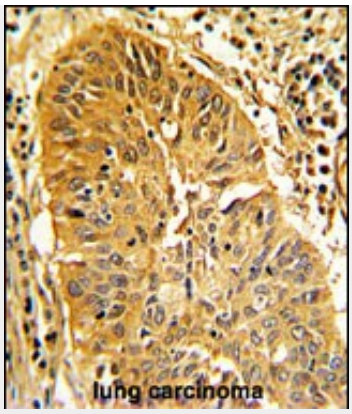
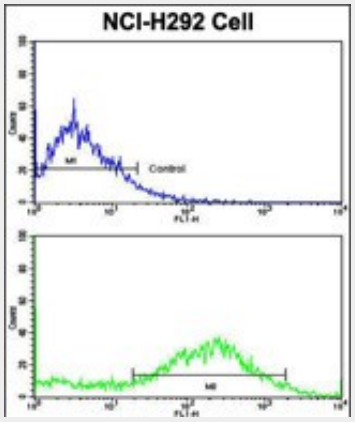


Formalin-fixed and paraffin-embedded human lung carcinoma with CALD1 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of NCI-H292 cells using CALD1 Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

CALD1 Antibody (Center) - 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) - References

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