10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Caldesmon, HMW (h-Caldesmon) Antibody

Recombinant Rabbit Monoclonal Antibody
Catalog # AH13586

Product Information

Application	IHC-P, IF, FC
Primary Accession	Q05682
Other Accession	490203
Reactivity	Human, Rat
Host	Rabbit
Clonality	Monoclonal
Isotype	Rabbit / IgG, kappa
Clone Names	CALD1/1424R
Calculated MW	93231

Additional Information

Gene ID	800
Other Names	CAD; CALD1; Caldesmon 1 Isoform 1; Caldesmon 1 Isoform 2; Caldesmon 1 Isoform 3; Caldesmon 1 Isoform 4; Caldesmon 1 Isoform 5; CDM; HCAD; LCAD; NAG22
Application Note	Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (1-2ug/ml); ,Immunohistology (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 1mM EDTA, pH 7.5-8.5, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-Caldesmon, HMW (h-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

Recognizes a protein of 150kDa, which is identified as the high molecular weight variant of Caldesmon. Two closely related variants of human caldesmon have been identified which are different in their electrophoretic mobility and cellular distribution. The h-caldesmon variant (120-150kDa) is predominantly expressed in smooth muscle whereas l-caldesmon (70-80kDa) is found in non- muscle tissue and cells. Neither of the two variants has been detected in skeletal muscle. This MAb recognizes only the 150kDa variant (h-caldesmon) in Western blots of human aortic media extracts and is unreactive with fibroblast extracts from cultivated human foreskin. Caldesmon is a developmentally regulated protein involved in smooth muscle and non-muscle contraction.

Images