

ARG66533 anti-Caldesmon phospho (Ser789) antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Caldesmon phospho (Ser789)
Tested Reactivity	Hu, Ms
Predict Reactivity	Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Caldesmon
Species	Human
Immunogen	KLH-conjugated phosphospecific peptide around Ser789 of Human Caldesmon.
Conjugation	Un-conjugated
Alternate Names	CDM; HCAD; Caldesmon; NAG22; L-CAD; LCAD; H-CAD

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:100 - 1:500
	IHC-P	1:100 - 1:200
	WB	1:500 - 1:1000
Application Note	IHC-P: Antigen Retrieval: Heat mediation was performed in Sodium citrate buffer (pH 6.0). * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	80 kDa	

Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.42% Potassium phosphate (pH 7.3), 0.87% NaCl, 0.01% Sodium azide and 30% Glycerol.
Preservative	0.01% Sodium azide
Stabilizer	30% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

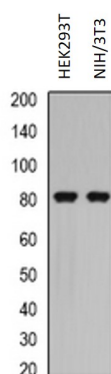
Note

For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

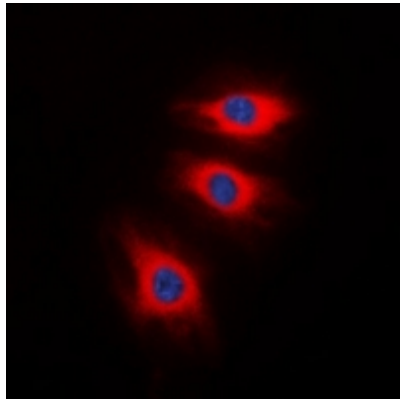
Gene Symbol	CALD1
Gene Full Name	caldesmon 1
Background	This gene encodes a calmodulin- and actin-binding protein that plays an essential role in the regulation of smooth muscle and nonmuscle contraction. The conserved domain of this protein possesses the binding activities to Ca(2+)-calmodulin, actin, 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. [provided by RefSeq, Jul 2008]
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 play an essential role during cellular mitosis and receptor capping. Involved in Schwann cell migration during peripheral nerve regeneration (By similarity). [UniProt]
Calculated Mw	93 kDa
PTM	In non-muscle cells, phosphorylation by CDK1 during mitosis causes caldesmon to dissociate from microfilaments. Phosphorylation reduces caldesmon binding to actin, myosin, and calmodulin as well as its inhibition of actomyosin ATPase activity. Phosphorylation also occurs in both quiescent and dividing smooth muscle cells with similar effects on the interaction with actin and calmodulin and on microfilaments reorganization. CDK1-mediated phosphorylation promotes Schwann cell migration during peripheral nerve regeneration (By similarity). [UniProt]
Cellular Localization	Cytoplasm, cytoskeleton. Cytoplasm, myofibril. Note=On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle). [UniProt]

Images



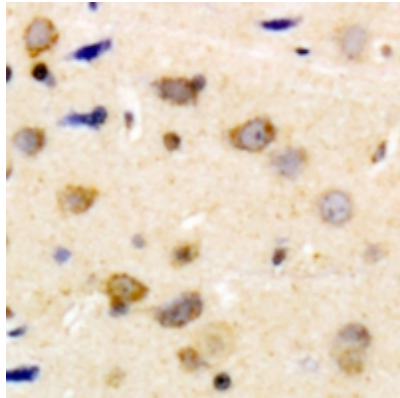
ARG66533 anti-Caldesmon phospho (Ser789) antibody WB image

Western blot: PMA-treated HEK293T and NIH/3T3 whole cell lysates stained with ARG66533 anti-Caldesmon phospho (Ser789) antibody.



ARG66533 anti-Caldesmon phospho (Ser789) antibody ICC/IF image

Immunofluorescence: Formalin-fixed HeLa cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were stained with ARG66533 anti-Caldesmon phospho (Ser789) antibody (red) in 3% BSA-PBS and incubated overnight at 4°C in a humidified chamber. DAPI (blue) for nuclear staining.



ARG66533 anti-Caldesmon phospho (Ser789) antibody IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human brain tissue. Antigen Retrieval: Heat mediation was performed in Sodium citrate buffer (pH 6.0). The section was then stained with ARG66533 anti-Caldesmon phospho (Ser789) antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.