



Rabbit Anti-Caldesmon antibody

SL1589R

Product Name:	Caldesmon
Chinese Name:	钙介素抗体
Alias:	CAD; CALD 1; CALD1; Caldesmon 1; Caldesmon 1 Isoform 1; Caldesmon 1 Isoform 2; Caldesmon 1 Isoform 3; Caldesmon 1 Isoform 4; Caldesmon 1 Isoform 5; Caldesmon1; CDM; H CAD; HCAD; L CAD; LCAD; MGC21352; NAG22; CALD1_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Cow,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	94kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Caldesmon:701-798/798
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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.

Subcellular Location:

Cytoplasm, cytoskeleton. Cytoplasm, myofibril. Note=On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle).

Tissue Specificity:

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.

Post-translational modifications:

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).

Similarity:

Belongs to the caldesmon family.

SWISS:

Q05682

Gene ID:

800

Database links:

[Entrez Gene: 800](#)Human

[Entrez Gene: 109624](#)Mouse

[Entrez Gene: 204926](#)Rat

[Entrez Gene: 25687](#)Rat

[Oimim: 114213](#)Human

[SwissProt: Q05682](#)Human

[SwissProt: Q8VCQ8](#)Mouse

[SwissProt: Q05682](#)Rat

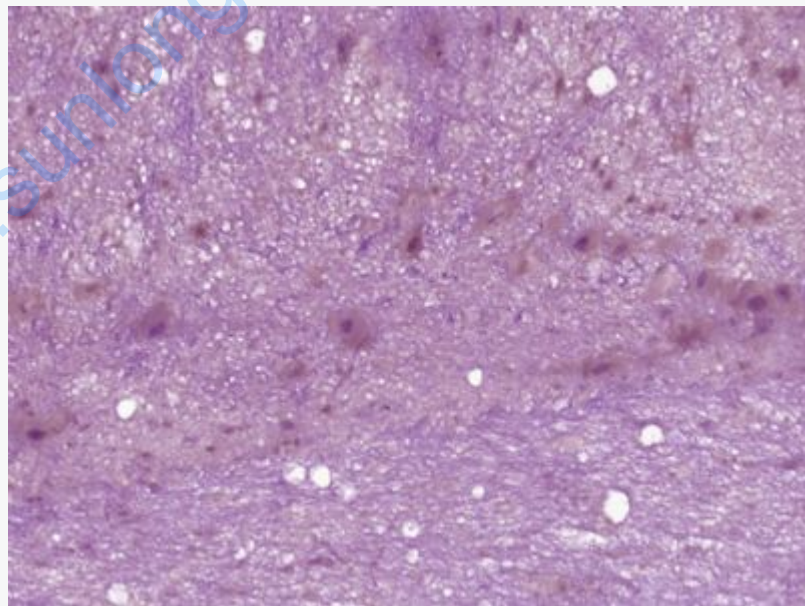
[Unigene: 490203](#)Human

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

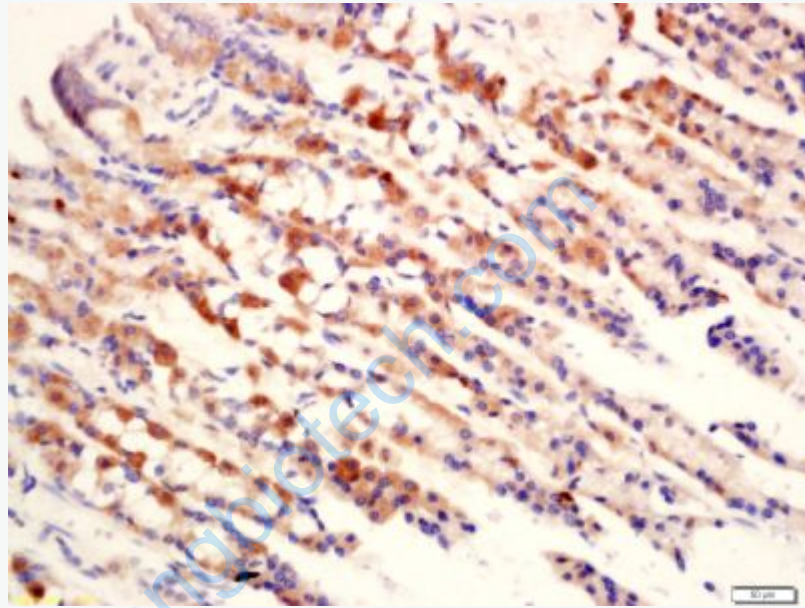
Caldesmon是一种平滑肌肌动蛋白和钙调蛋白的Binding protein, 被认为是一种平滑肌细胞的Marker,存在于平滑肌或非平滑肌细胞中的一种Cytoskeleton蛋白。它可以与肌动蛋白、肌球蛋白、原肌球蛋白和钙调蛋白相互作用, 是平滑肌细胞的一个Marker, 可用于判断子宫Tumour来源。在结肠直肠Tumour中是区分纤维细胞和肌纤维细胞的一个Marker。

Picture:



Paraformaldehyde-fixed, paraffin embedded (Rat spinal cord); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C

for 30min; Antibody incubation with (Caldesmon) Polyclonal Antibody, Unconjugated (SL1589R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Tissue/cell: Rat stomach tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Caldesmon Polyclonal Antibody, Unconjugated(SL1589R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining