

## Caldesmon Polyclonal Antibody

<b>Catalog No :</b>	YT0608
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	WB;IHC;IF;IP;ELISA
<b>Target :</b>	Caldesmon
<b>Fields :</b>	>>Vascular smooth muscle contraction
<b>Gene Name :</b>	CALD1
<b>Protein Name :</b>	Caldesmon
<b>Human Gene Id :</b>	800
<b>Human Swiss Prot No :</b>	Q05682
<b>Rat Gene Id :</b>	25687
<b>Rat Swiss Prot No :</b>	Q62736
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human Caldesmon. AA range:744-793
<b>Specificity :</b>	Caldesmon Polyclonal Antibody detects endogenous levels of Caldesmon protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:5000. Not yet tested in other applications.
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

**Concentration :** 1 mg/ml

**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)

**Observed Band :** 80kD

**Cell Pathway :** Vascular smooth muscle contraction;

**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 :** domain:The N-terminal part seems to be a myosin/calmodulin-binding domain, and the C-terminal a tropomyosin/actin/calmodulin-binding domain. These two domains are separated by a central helical region in the smooth-muscle form.,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.,PTM:In non-muscle cells, phosphorylation by CDC2 during mit

**Subcellular Location :** Cytoplasm, cytoskeleton . Cytoplasm, myofibril . Cytoplasm, cytoskeleton, stress fiber . On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle). .

**Expression :** 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.

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