

## Caldesmon Polyclonal Antibody

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| <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

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

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**Observed Band :** 80kD

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

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**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],

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**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

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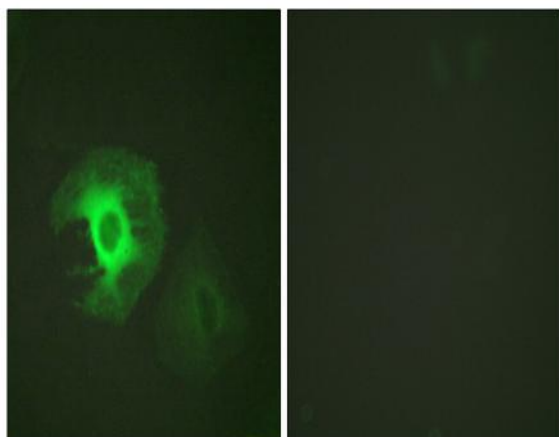
**Subcellular Location :** Cytoplasm, cytoskeleton . Cytoplasm, myofibril . Cytoplasm, cytoskeleton, stress fiber . On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle). .

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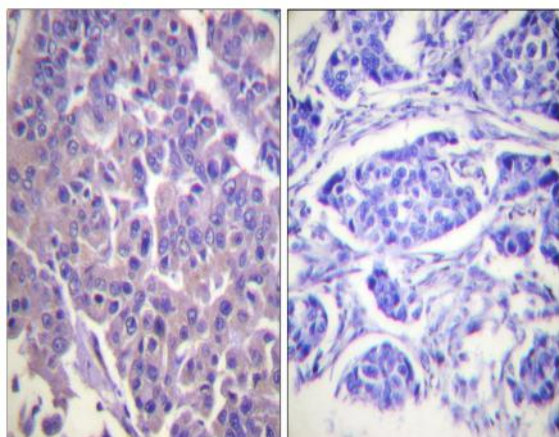
**Expression :** High-molecular-weight caldesmon (isoform 1) is predominantly expressed in smooth muscles, whereas low-molecular-weight caldesmon (isoforms 2, 3, 4 and 5) are widely distributed in non-muscle tissues and cells. Not expressed in skeletal muscle or heart.

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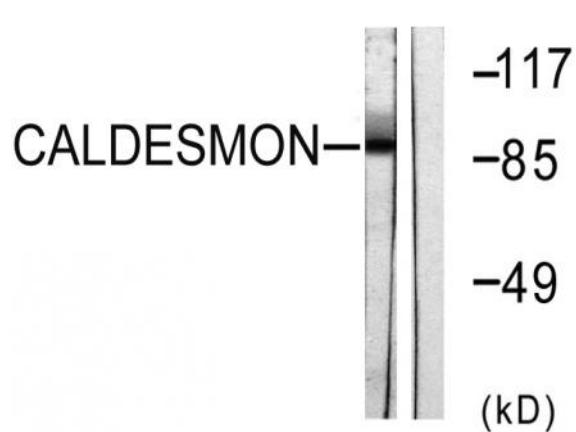
## Products Images



Immunofluorescence analysis of HeLa cells, using Caldesmon Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using Caldesmon Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from HeLa cells, treated with EGF 200ng/ml 30', using Caldesmon Antibody. The lane on the right is blocked with the synthesized peptide.