



# Caldesmon (phospho Ser789) Polyclonal Antibody

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>         | BYab-03051                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Isotype</b>            | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Reactivity</b>         | Human;Mouse;Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Applications</b>       | WB;IHC;IF;ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Gene Name</b>          | CALD1                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Protein Name</b>       | Caldesmon                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Immunogen</b>          | The antiserum was produced against synthesized peptide derived from human Caldesmon around the phosphorylation site of Ser789. AA range:744-793                                                                                                                                                                                                                                                                                                                     |
| <b>Specificity</b>        | Phospho-Caldesmon (S789) Polyclonal Antibody detects endogenous levels of Caldesmon protein only when phosphorylated at S789.                                                                                                                                                                                                                                                                                                                                       |
| <b>Formulation</b>        | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>             | Polyclonal, Rabbit,IgG                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purification</b>       | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                                                                                               |
| <b>Dilution</b>           | Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications.                                                                                                                                                                                                                                                                                                         |
| <b>Concentration</b>      | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Purity</b>             | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Storage Stability</b>  | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>           | CALD1; CAD; CDM; Caldesmon; CDM                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Observed Band</b>      | 80kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Cell Pathway</b>       | Cytoplasm, cytoskeleton . Cytoplasm, myofibril . Cytoplasm, cytoskeleton, stress fiber . On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle). .                                                                                                                                                                                                                                                                                      |
| <b>Tissue Specificity</b> | 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.                                                                                                                                                                                                        |
| <b>Function</b>           | 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 |

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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

**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  $\text{Ca}(2+)$ -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  $\text{Ca}(2+)$ -dependent inhibition of smooth muscle contraction. Alternative splicing of this gene results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2008],

**matters needing attention**

Avoid repeated freezing and thawing!

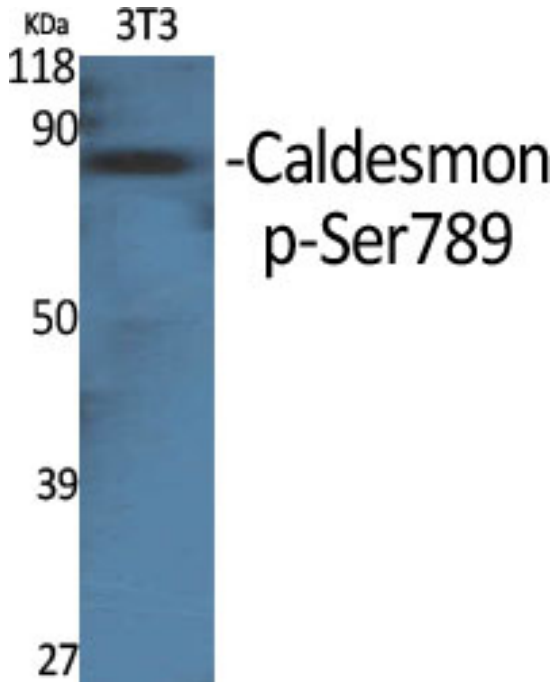
**Usage suggestions**

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

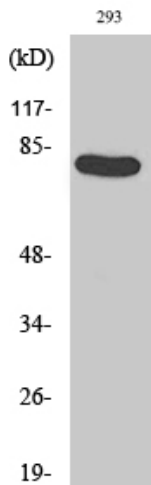
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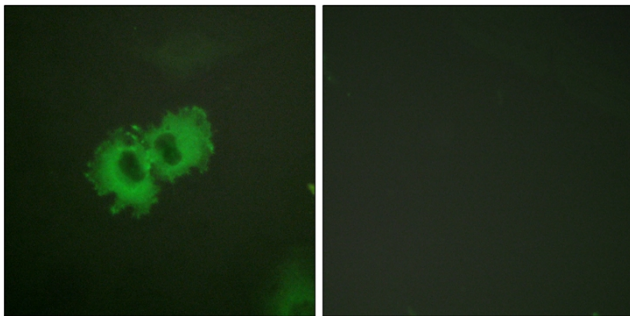
## Products Images



Western Blot analysis of various cells using  
Phospho-Caldesmon (S789) Polyclonal Antibody



Western Blot analysis of 293 cells using  
Phospho-Caldesmon (S789) Polyclonal Antibody



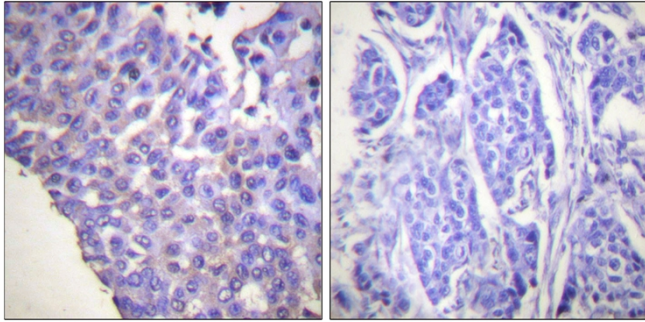
Immunofluorescence analysis of HeLa cells, using  
Caldesmon (Phospho-Ser789) Antibody. The picture  
on the right is blocked with the phospho peptide.

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Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using Caldesmon (Phospho-Ser789) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from HeLa cells treated with EGF 200ng/ml 30', using Caldesmon (Phospho-Ser789) Antibody. The lane on the right is blocked with the phospho peptide.