

## Caldesmon (ABT125) IHC kit

CatalogNo: IHCM6826

### Key Features

#### Host Species

- Mouse

#### Reactivity

- Human,

#### Applications

- IHC

#### Isotype

- IgG2a,Kappa

### Recommended Dilution Ratios

### Storage

**Storage\*** 2°C to 8°C/1 year

### Basic Information

**Clonality** Monoclonal

**Clone Number** ABT125

### Immunogen Information

**Immunogen** Synthesized peptide derived from human Caldesmon pan AA range: 100-200

**Specificity** The antibody can recognize human h-caldesmon and l-caldesmon protein.

### Target Information

**Gene name** CALD1 CAD CDM

**Protein Name**

Caldesmon pan

**Organism**

Human

**Gene ID**[800](#);**UniProt ID**[Q05682](#);**Cellular Localization**

Cytoplasmic

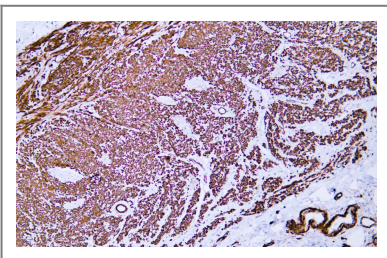
**Tissue specificity**

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.

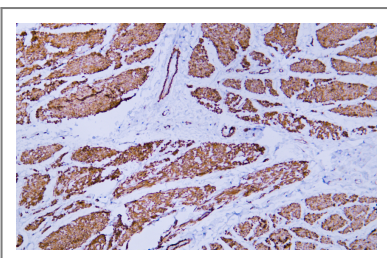
**Function**

**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 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.  
**similarity:**Belongs to the caldesmon family.  
**subcellular location:**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.,

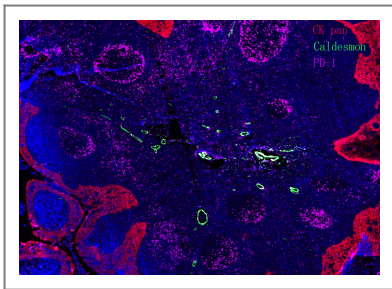
## Validation Data



Human appendix tissue was stained with anti-Caldesmon(ABT125) antibody.



Human smooth muscle tissue was stained with anti-Caldesmon(ABT125) antibody.



Fluorescence multiplex immunohistochemical analysis of normal human appendix tissue (formalin-fixed paraffin-embedded section).The section was incubated in 3 rounds of staining; in the order of CK PAN .( Catalog no:YM6815 1/200 dilution), PD-1.(Catalog no: YM6208 1/200 dilution), Caldesmon pan. (Catalog no:YM6826 1/200 dilution),each using a separate fluorescent tyramide signal amplification system : Treble-Fluorescence immunohistochemical mouse/rabbit kit Catalog NO: RS0035 (pH9.0)

## Contact information

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Please scan the QR code to access additional product information:  
**Caldesmon (ABT125) IHC kit**

For Research Use Only. Not for Use in Diagnostic Procedures.

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