Caldesmon (ABT125) Mouse mAb

CatalogNo: YM4379

Key Features

Host Species
- Mouse

Reactivity
- Human,

Applications
- IHC,WB,IF,ELISA

MW
- 93kD (Calculated)

93kD (Observed)

Isotype
- IgG2a,Kappa

Recommended Dilution Ratios

IHC 1:200-1000
WB 1:500-2000
IF 1:100-500
ELISA 1:1000-5000

Storage

Storage*	-15°C to -25°C/1 year(Do not lower than -25°C)
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA

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. In western blotting , the antibody labels a 93 kDa band.

Target Information

Gene name CALD1 CAD CDM

Protein Name Caldesmon pan

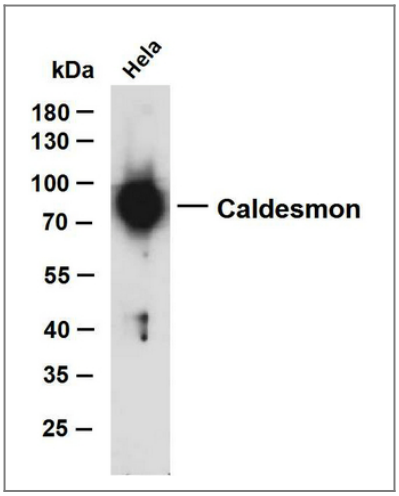
Organism	Gene ID	UniProt ID
Human	800;	Q05682;

Cellular Localization Cytoplasmic

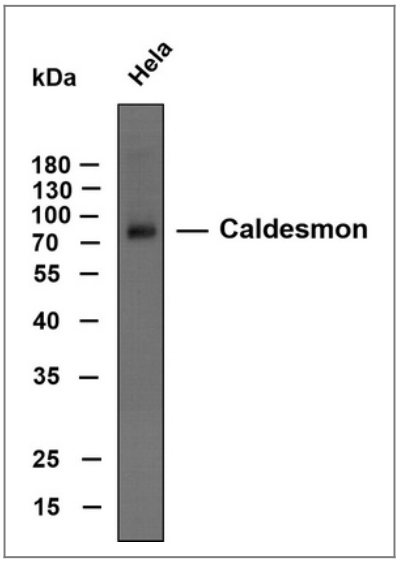
Tissue specificity High-molecular-weight caldesmon (isoform 1) is predominantly expressed in smooth muscles, whereas low-molecular-weight caldesmon (isoforms 2, 3, 4 and 5) are widely distributed in non-muscle tissues and cells. Not expressed in skeletal muscle or heart.

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.,

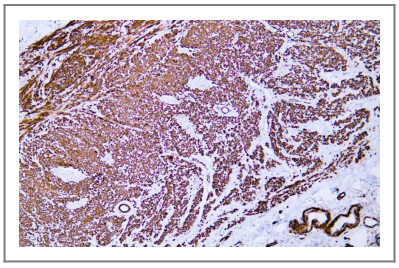
Validation Data



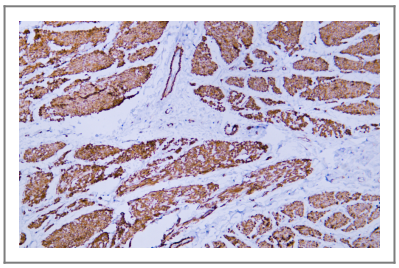
Hela whole cell lysates were separated by 10% SDS-PAGE, and the membrane was blotted with anti-Caldesmon(ABT125) antibody. The HRP-conjugated Goat anti-Mouse IgG(H + L) antibody was used to detect the antibody. Lane 1: Hela



Whole cell lysates of Hela were separated by 10% SDS-PAGE, and the membrane was blotted with anti-Caldesmon antibody. The HRP-conjugated anti-Mouse IgG antibody was used to detect the antibody.



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



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

Contact information

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Please scan the QR code to access additional product information:
Caldesmon (ABT125) Mouse mAb