Caldesmon (PT0695R) PT™ Rabbit mAb

CatalogNo: YM8081 Recombinant

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,IHC,IF,IP,ELISA

MW
- 93kD (Calculated)
70kD (Observed)

Isotype
- IgG,Kappa

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

Recommended Dilution Ratios

IHC 1:200-1000
WB 1:1000-5000
IF 1:200-1000
ELISA 1:5000-20000
IP 1:50-200

Basic Information

Clonality	Monoclonal
Clone Number	PT0695R

Immunogen Information

Specificity	Endogenous

Target Information

Gene name CALD1 CAD CDM

Protein Name Caldesmon

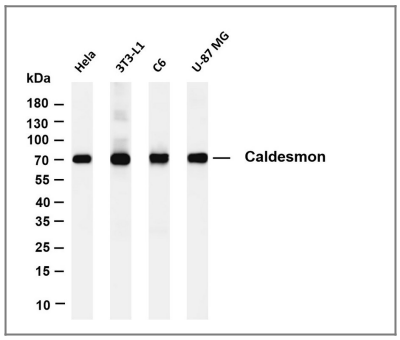
Organism	Gene ID	UniProt ID
Human	8087;	Q05682;
Mouse	14359;	Q61584;
Rat	361927;	Q5XI81;

Cellular Localization Cytoplasm

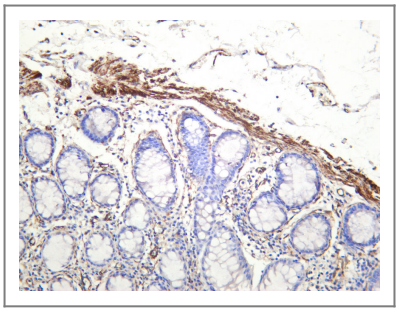
Tissue specificity Expressed in all tissues examined including heart, brain, kidney and testis.

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.,

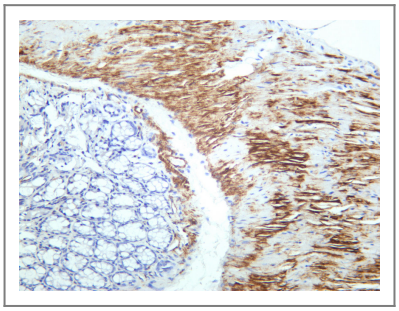
Validation Data



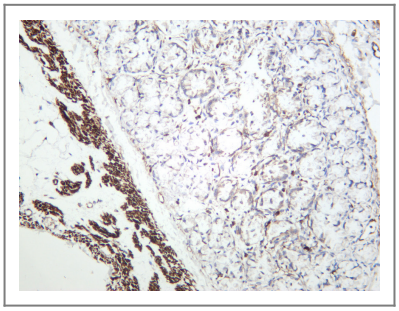
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Caldesmon antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: Hela Lane 2: 3T3-L1 Lane 3: C6 Lane 4: U-87 MG Predicted band size: 93kDa Observed band size: 70kDa



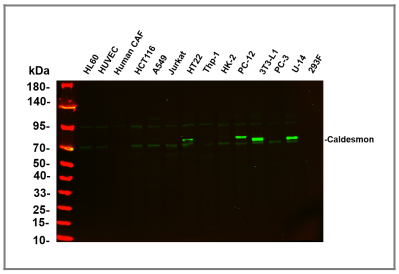
Human colon was stained with anti-Caldesmon rabbit antibody



Mouse colon was stained with anti-Caldesmon rabbit antibody



Rat colon was stained with anti-Caldesmon rabbit antibody



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4℃, over night with a 1:5000 dilution . The Dylight 800-conjugated Goat anti-Rabbit antibody(Cat:RS23920) was used to detect the antibody. Lane1: HL60 - Human promyelocytic leukemia cell Lane2: HUVEC - Human umbilical vein endothelial cell Lane3: Human CAF - Human cancer-associated fibroblast Lane4: HCT116 - Human colorectal carcinoma Lane5: A549 - Human lung carcinoma Lane6: Jurkat - Human T lymphocyte leukemia Lane7: HT22 - Mouse hippocampal neuronal Lane8: Thp-1 - Human monocytic leukemia Lane9: HK-2 - Human proximal tubular epithelial Lane10: PC-12 - Rat adrenal pheochromocytoma Lane11: 3T3-L1 - Mouse embryonic fibroblast Lane12: PC-3 - Human prostate adenocarcinoma Lane13: U-14 - Mouse cervical carcinoma Lane14: 293F - HEK293 derivative, adapted for suspension culture Predicted band size: 93kDa Observed band size: 70kDa

Contact information

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Please scan the QR code to access additional product information:
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