Caldesmon (ANT0079R) Rabbit mAb

CatalogNo: ANT8229 Recombinant

Formulation: PBS,50%glycerol,0.05%Proclin 300,0.05%BSA
Quantity : 100 ug/vial

Host Species	Reactivity	Applications
• Rabbit • Human,Mouse,Rat,	• WB,IHC,IF,IP,ELISA	

MW	Isotype
• 93kD (Calculated) 70kD (Observed)	• IgG,Kappa

Recommended Dilution Ratios

IHC 1:200-1:1000
WB 1:2000-1:10000
IF 1:200-1:1000
ELISA 1:5000-1:20000
IP 1:50-1:200

Storage

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

Basic Information

Clonality	Monoclonal
Clone Number	ANT0079R

Target Information

Immunogen Information Specificity

Endogenous

Gene name CALD1

Protein Name Caldesmon

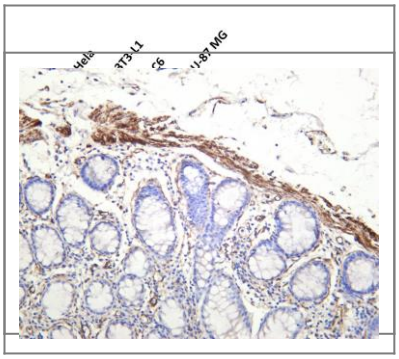
Organism	Gene ID	UniProt ID
Human	800;	Q05682;
Rat	25687;	Q62736;

Cellular Localization Cytoplasm

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.

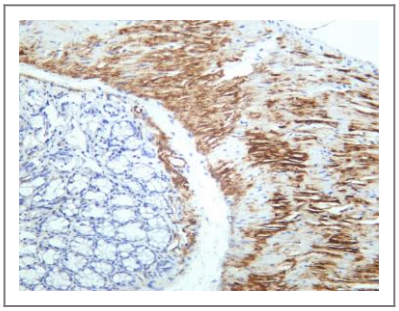
Function Domain:The N-terminal part seems to be a myosin/calmodulin-binding domain, and the Cterminal a tropomyosin/actin/calmodulin-binding domain. These two domains are separated by a central helical region in the smooth-muscle form.,Function:Actin- and myosin-binding protein implicated in the regulation 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.,ANTM: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

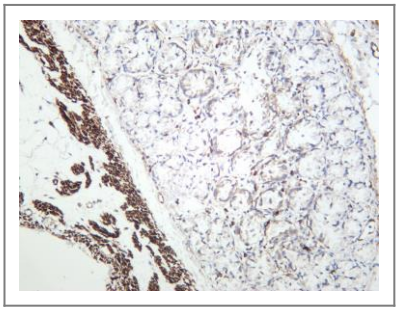


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Caldesmon (ANT0079R) antibody. The HRPconjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: Hela Lane 2: 3T3-L1 Lane 3: C6 Lane 4: U-87 MG Predicted band size: 93kDa Observed band size: 70kDa

Human colon was stained with anti-Caldesmon (ANT0079R) rabbit antibody



Mouse colon was stained with anti-Caldesmon (ANT0079R) rabbit antibody



Rat colon was stained with anti-Caldesmon (ANT0079R) rabbit antibody

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