Best Tools for immunology Research

Caldesmon (ABT146R) rabbit mAb

Catalog No :	YM7026
Reactivity :	Human;
Applications :	WB; IHC; ELISA
Target :	Caldesmon
Fields :	>>Vascular smooth muscle contraction
Gene Name :	CALD1
Protein Name :	Caldesmon pan
Human Gene Id :	800
Human Swiss Prot No :	Q05682
Immunogen :	Synthesized peptide derived from human Caldesmon pan AA range:100-200
Specificity :	This antibody detects endogenous levels of Caldesmon
Formulation :	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source :	Monoclonal, Rabbit IgG1, Kappa
Dilution :	IHC 1:100-500, WB 1:500-1000, ELISA 1:5000-20000
Purification :	Recombinant Expression and Affinity purified
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Molecularweight :	93kD

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 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 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],

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 mit

Subcellular Location : Cytoplasmic

Expression : 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.

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