

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Caldesmon/CALD1 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 767001
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Caldesmon/CALD1 Lys696-Val793 Accession # Q05682
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Caldesmon, also known as CaD or h-CaD, is a 120-150 kDa cytosolic protein that is important in actin cytoskeleton dynamics. Smooth muscle Caldesmon regulates calcium-dependent smooth muscle contraction by stabilizing actin filaments, inhibiting the actomyosin ATPase, and interacting with F-actin, myosin, tropomyosin, and calmodulin. It is also a key molecule in other related actin-related processes including cytokinesis, cell migration, wound healing, and exocytosis. Caldesmon activity is regulated by serine and tyrosine phosphorylation by multiple kinases. Alternate splicing generates 70-80 kDa isoforms of human Caldesmon, known as I-CaD, that lack the central repeating region of the protein (aa 208-436 or aa 208-462). These isoforms are widely expressed and are comparable in size to full length mouse and rat Caldesmon. Within aa 696-793, human Caldesmon shares 94% and 95% aa sequence identity with mouse and rat Caldesmon, respectively.

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