

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 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 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.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.