abcam

Product datasheet

HRP Anti-Caldesmon/CDM antibody [E89] ab208234

Recombinant RabMAb

2 Images

Overview

Product name	HRP Anti-Caldesmon/CDM antibody [E89]
Description	HRP Rabbit monoclonal [E89] to Caldesmon/CDM
Host species	Rabbit
Conjugation	HRP
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa and NIH3T3 cell lysates
General notes	Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle. Store In the Dark.
Storage buffer	pH: 7.40 Preservative: 0.1% Proclin 300 Solution Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	E89
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab208234 in the following tested applications.

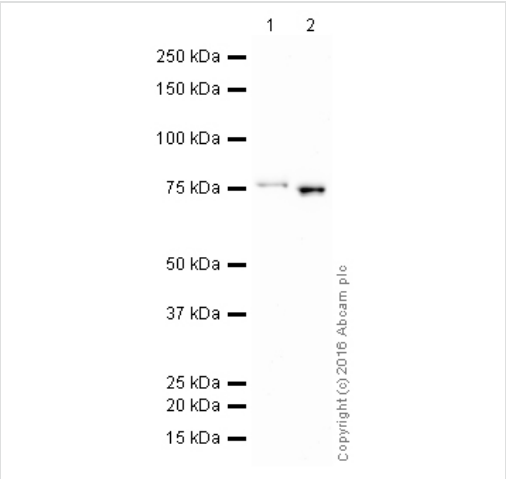
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/15000. Detects a band of approximately 75 kDa (predicted molecular weight: 93 kDa).

Target

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.
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.
Sequence similarities	Belongs to the caldesmon family.
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.
Post-translational modifications	In non-muscle cells, phosphorylation by CDK1 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.
Cellular localization	Cytoplasm > cytoskeleton. Cytoplasm > myofibril. On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle).

Images



Western blot - HRP Anti-Caldesmon/CDM antibody [E89] (ab208234)

All lanes : HRP Anti-Caldesmon/CDM antibody [E89] (ab208234) at 1/5000 dilution

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : NIH 3T3 (Mouse) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

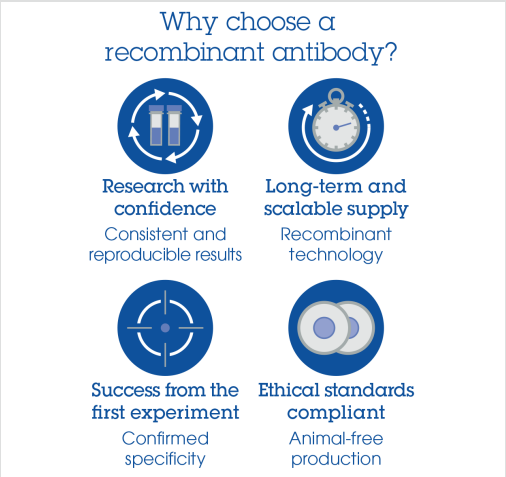
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 93 kDa
Observed band size: 75 kDa

Exposure time: 4 minutes

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% milk before being incubated with ab208234 overnight at 4°C. Antibody binding was visualised using ECL development solution **ab133406**.



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