abcam

Product datasheet

Anti-Caldesmon/CDM antibody ab183146

2 References 2 Images

Overview

Product name	Anti-Caldesmon/CDM antibody
Description	Rabbit polyclonal to Caldesmon/CDM
Host species	Rabbit
Tested applications	**Suitable for:** IP, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Guinea pig, Dog, Chimpanzee, Macaque monkey, Rhesus monkey, Gorilla, Chinese hamster, Common marmoset, Orangutan
Immunogen	Synthetic peptide within Human Caldesmon/CDM aa 500-600. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please **contact** our Scientific Support team to discuss your requirements. Database link: **Q05682** Run BLAST with Run BLAST with
Positive control	HeLa and 293T whole cell lysates.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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.
Storage buffer	pH: 7 Preservative: 0.09% Sodium azide Constituent: 99% Tris citrate/phosphate pH 7 to 8.

Purity	Immunogen affinity purified
Purification notes	ab183146 was affinity purified using an epitope specific to Caldesmon/CDM immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab183146 in the following tested applications.

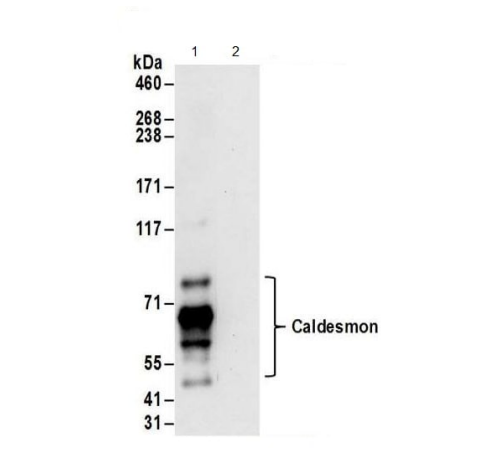
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IP		Use at 2-10 µg/mg of lysate.
WB		1/2000 - 1/10000. 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

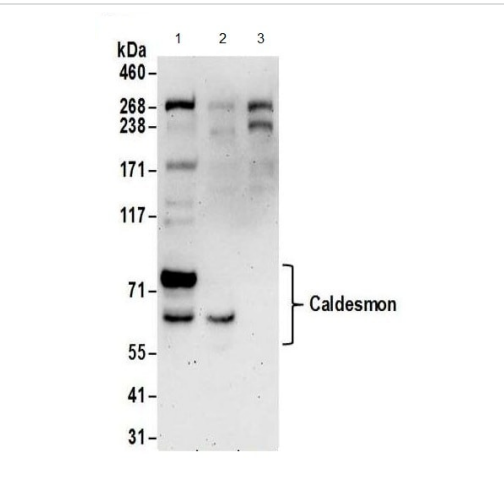


Immunoprecipitation - Anti-Caldesmon/CDM antibody (ab183146)

Immunoprecipitation of HeLa whole cell lysate using ab183146 at 6 µg/mg of lysate (1 mg/IP; 20% of IP loaded per lane) followed by detection of Caldesmon/CDM with ab183146 at 1 µg/ml. The lysate in lane 2 is precipitated with an IgG control antibody.

Exposure: 10second

developed using the ECL technique



Western blot - Anti-Caldesmon/CDM antibody (ab183146)

All lanes : Anti-Caldesmon/CDM antibody (ab183146) at 0.1 µg/ml

Lane 1 : HeLa whole cell lysate
Lane 2 : 293T whole cell lysate
Lane 3 : Jurkat whole cell lysate

Lysates/proteins at 50 µg per lane.

Developed using the ECL technique.

Predicted band size: 93 kDa

Exposure time: 3 minutes

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