

Caldesmon (C-19): sc-7574

BACKGROUND

Caldesmon, Filamin 1, Nebulin and Villin are differentially expressed and regulated Actin binding proteins. Both muscular and non-muscular forms of Caldesmon have been identified and each has been shown to bind to Actin as well as to calmodulin and myosin. Alternative splicing of the gene encoding Caldesmon results in five isoforms. Muscular Caldesmon (isoform 1), also designated high molecular weight Caldesmon or H-Caldesmon (H-CAD), is expressed predominantly on thin filaments in smooth muscle. Non-muscular Caldesmon (isoforms 2-5), also designated low molecular weight Caldesmon or L-Caldesmon (L-CAD), is widely expressed in non-muscle tissues and cells. Filamin 1, which is ubiquitously expressed and exists as a homodimer, functions to crosslink Actin to filaments. Nebulin is a large filamentous protein specific to muscle tissue that may function as a ruler for filament length. Several isoforms of Nebulin are produced by alternative exon usage. Villin is Ca^{2+} -regulated and is the major structural component of the brush border of absorptive cells.

CHROMOSOMAL LOCATION

Genetic locus: CALD1 (human) mapping to 7q33; Cald1 (mouse) mapping to 6 B1.

SOURCE

Caldesmon (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of H-Caldesmon of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7574 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Caldesmon (C-19) is recommended for detection of H-Caldesmon and L-Caldesmon I and II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Caldesmon (C-19) is also recommended for detection of H-Caldesmon and L-Caldesmon I and II in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Caldesmon siRNA (h): sc-29880, Caldesmon siRNA (m): sc-29881, Caldesmon shRNA Plasmid (h): sc-29880-SH, Caldesmon shRNA Plasmid (m): sc-29881-SH, Caldesmon shRNA (h) Lentiviral Particles: sc-29880-V and Caldesmon shRNA (m) Lentiviral Particles: sc-29881-V.

Molecular Weight of H-Caldesmon: 90-150 kDa.

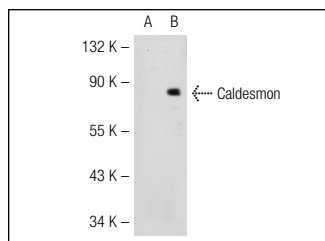
Molecular Weight of L-Caldesmon: 60-80 kDa.

Positive Controls: Caldesmon (h): 293T Lysate: sc-113847.

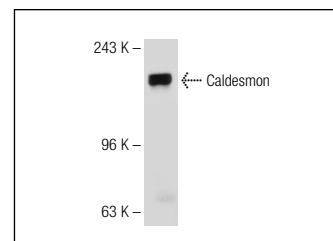
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Caldesmon (C-19): sc-7574. Western blot analysis of Caldesmon expression in non-transfected: sc-117752 (A) and human Caldesmon transfected: sc-113847 (B) 293T whole cell lysates.



Caldesmon (C-19): sc-7574. Western blot analysis of Caldesmon expression in NIH/3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

- Yang, L., et al. 2008. Effect of long-term partial bladder outlet obstruction on Caldesmon isoforms and their correlation with contractile function. *Acta Pharmacol. Sin.* 29: 600-605.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Caldesmon (A-2): sc-271222** or **Caldesmon (C21): sc-58700**, our highly recommended monoclonal alternatives to Caldesmon (C-19).