SANTA CRUZ BIOTECHNOLOGY, INC.

H-Caldesmon (h-CALD): sc-58703

BACKGROUND

H-Caldesmon (h-CALD), also designated high molecular weight Caldesmon, Caldesmon isoform 1 and muscular Caldesmon, is found in both smooth and non-smooth muscle cells. Expressed predominantly on thin filaments in smooth muscle, H-Caldesmon is an Actin-interacting and calmodulin-binding protein that regulates cellular contraction, exocytosis, endocytosis, cell movement and cell shape change. Although H-Caldesmon is expressed in smooth muscle tumors of the soft tissue, it is not expressed in myofibroblasts. H-Caldesmon is also useful in differentiating not only smooth muscle tumors from bone tumors with myoid differentiation, but also epithelioid mesothelioma versus lung adenocarcinoma.

CHROMOSOMAL LOCATION

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

SOURCE

H-Caldesmon (h-CALD) is a mouse monoclonal antibody raised against crude uterus extract of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

H-Caldesmon (h-CALD) is available conjugated to agarose (sc-58703 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58703 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58703 PE), fluorescein (sc-58703 FITC), Alexa Fluor® 488 (sc-58703 AF488), Alexa Fluor® 546 (sc-58703 AF546), Alexa Fluor® 594 (sc-58703 AF594) or Alexa Fluor® 647 (sc-58703 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-58703 AF680) or Alexa Fluor® 790 (sc-58703 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

H-Caldesmon (h-CALD) is recommended for detection of H-Caldesmon 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for H-Caldesmon siRNA (h): sc-43202, H-Caldesmon shRNA Plasmid (h): sc-43202-SH and H-Caldesmon shRNA (h) Lentiviral Particles: sc-43202-V.

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

Positive Controls: human placenta extract: sc-363772, human ovary extract: sc-363769 or HISM cell lysate: sc-2229.

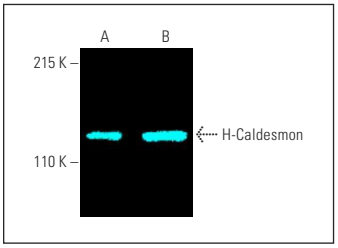
RESEARCH USE

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

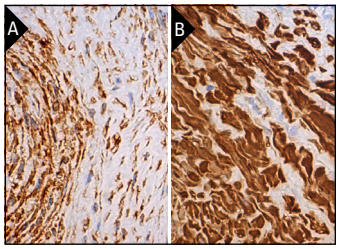
STORAGE

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

DATA



H-Caldesmon (h-CALD) Alexa Fluor® 647: sc-58703 AF647. Direct fluorescent western blot analysis of H-Caldesmon expression in human placenta (**A**) and human ovary (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214.



H-Caldesmon (h-CALD): sc-58703. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta (**A**) and human seminal vesicle (**B**) tissue showing cytoplasmic staining of smooth muscle cells.

SELECT PRODUCT CITATIONS

1. Zheng, Y., et al. 2012. Generation of a human urinary bladder smooth muscle cell line. In Vitro Cell. Dev. Biol. Anim. 48: 84-96.
2. Yang, G.Z., et al. 2013. Is mammary not otherwise specified-type sarcoma with CD10 expression a distinct entity? A rare case report with immunohistochemical and ultrastructural study. Diagn Pathol. 8: 14.
3. Srikhajon, K., et al. 2014. A new role for monocytes in modulating myometrial inflammation during human labor. Biol. Reprod. 91: 10.
4. Medel, S., et al. 2015. Attachment of primary vaginal fibroblasts to absorbable and non-absorbable implant materials coated with platelet-rich plasma: potential application in pelvic organ prolapse surgery. Female Pelvic Med. Reconstr. Surg. 21: 190-197.
5. Elcin, A.E., et al. 2017. Differential gene expression profiling of human adipose stem cells differentiating into smooth muscle-like cells by TGFβ1/BMP4. Exp. Cell Res. 352: 207-217.
6. Bâra, R.I., et al. 2020. Adding myofibroblasts to the lacrimal pump. Acta Histochem. 122: 151536.
7. Tauziède-Espariat, A., et al. 2022. The dural angioleiomyoma harbors frequent GJA4 mutation and a distinct DNA methylation profile. Acta Neuropathol. Commun. 10: 81.

PROTOCOLS

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