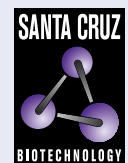


Filamin 1 (E-3): sc-17749



The Power to Question

BACKGROUND

Caldesmon, Filamin 1, Nebulin and Villin are differentially expressed and regulated Actin binding proteins. Both muscular (CDh) and non-muscular (CDI) forms of Caldesmon have been identified and each has been shown to bind to Actin as well as to calmodulin and Myosin. CDh is expressed predominantly on thin filaments in smooth muscle, whereas CDI 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 Ca²⁺-regulated and is the major structural component of the brush border of absorptive cells.

CHROMOSOMAL LOCATION

Genetic locus: FLNA (human) mapping to Xq28; Flna (mouse) mapping to X A7.3.

SOURCE

Filamin 1 (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 5-40 near the N-terminus of Filamin 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Filamin 1 (E-3) is available conjugated to agarose (sc-17749 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17749 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17749 PE), fluorescein (sc-17749 FITC), Alexa Fluor® 488 (sc-17749 AF488), Alexa Fluor® 546 (sc-17749 AF546), Alexa Fluor® 594 (sc-17749 AF594) or Alexa Fluor® 647 (sc-17749 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17749 AF680) or Alexa Fluor® 790 (sc-17749 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-17749 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Filamin 1 (E-3) is recommended for detection of Filamin 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:500, dilution range 1:500-1:2,500), 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 Filamin 1 siRNA (h): sc-35374, Filamin 1 siRNA (m): sc-35375, Filamin 1 shRNA Plasmid (h): sc-35374-SH, Filamin 1 shRNA Plasmid (m): sc-35375-SH, Filamin 1 shRNA (h) Lentiviral Particles: sc-35374-V and Filamin 1 shRNA (m) Lentiviral Particles: sc-35375-V.

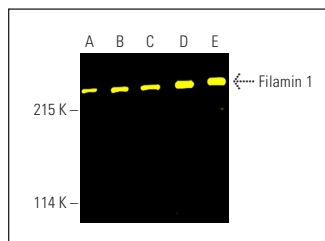
Molecular Weight of Filamin 1: 280 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180.

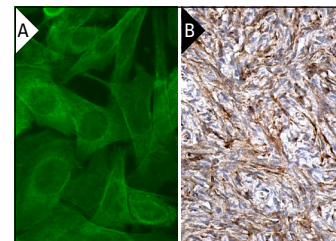
STORAGE

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

DATA



Filamin 1 (E-3) Alexa Fluor® 488: sc-17749 AF488. Direct fluorescent western blot analysis of Filamin 1 expression in HUV-EC-C (A), A549 (B), U-87 MG (C), HeLa (D) and A-10 (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Filamin 1 (E-3) Alexa Fluor® 488: sc-17749 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoskeletal localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). Filamin 1 (E-3): sc-17749. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of ovarian stroma cells (B).

SELECT PRODUCT CITATIONS

- Nagatsuka, Y., et al. 2003. Carbohydrate-dependent signaling from the phosphatidylglucoside-based microdomain induces granulocytic differentiation of HL-60 cells. *Proc. Natl. Acad. Sci. USA* 100: 7454-7459.
- Edimo, W.E., et al. 2016. SHIP2 controls plasma membrane PI(4,5)P2 thereby participating in the control of cell migration in 1321 N1 glioblastoma. *J. Cell Sci.* 129: 1101-1114.
- Pianta, A., et al. 2017. Two rheumatoid arthritis-specific autoantigens correlate microbial immunity with autoimmune responses in joints. *J. Clin. Invest.* 127: 2946-2956.
- Zhang, Y., et al. 2018. FLNA negatively regulated proliferation and metastasis in lung adenocarcinoma A549 cells via suppression of EGFR. *Acta Biochim. Biophys. Sin.* 50: 164-170.
- Ouyang, X., et al. 2019. *In situ* molecular characterization of endoneurial microvessels that form the blood-nerve barrier in normal human adult peripheral nerves. *J. Peripher. Nerv. Syst.* 24: 195-206.
- Qie, Y., et al. 2020. TACC3 promotes prostate cancer cell proliferation and restrains primary cilium formation. *Exp. Cell Res.* 390: 111952.
- Moore, A.S., et al. 2021. Actin cables and comet tails organize mitochondrial networks in mitosis. *Nature* 591: 659-664.
- Yang, C., et al. 2022. Targeting Filamin A alleviates ovariectomy-induced bone loss in mice via the WNT/β-catenin signaling pathway. *Cell. Signal.* 90: 110191.

RESEARCH USE

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

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