

Filamin 1 (N-19): sc-7565

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 Ca^{2+} -regulated and is the major structural component of the brush border of absorptive cells.

REFERENCES

1. Weihing, R.R. 1988. Actin-binding and dimerization domains of HeLa cell filamin. *Biochemistry* 27: 1865-1869.
2. Marston, S., et al. 1992. Caldesmon binds to smooth muscle Myosin and Myosin rod and crosslink thick filaments to Actin filaments. *J. Muscle Res. Cell Motil.* 13: 206-218.
3. Maunoury, R., et al. 1992. Developmental regulation of villin gene expression in the epithelial cell lineages of mouse digestive and urogenital tracts. *Development* 115: 717-728.
4. Labeit, S., et al. 1995. The complete primary structure of human nebulin and its correlation to muscle structure. *J. Mol. Biol.* 248: 308-315.
5. Huber, P.A., et al. 1996. Multiple-sited interaction of caldesmon with Ca^{2+} -calmodulin. *Biochem. J.* 316: 413-420.
6. Zhang, J.Q., et al. 1996. cDNA cloning of mouse nebulin. Evidence that the nebulin-coding sequence is highly conserved among vertebrates. *Eur. J. Biochem.* 239: 835-841.

CHROMOSOMAL LOCATION

Genetic locus: FLNA (human) mapping to Xq28.

SOURCE

Filamin 1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Filamin 1 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-7565 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Filamin 1 (N-19) is recommended for detection of Filamin 1 of 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).

Suitable for use as control antibody for Filamin 1 siRNA (h): sc-35374, Filamin 1 shRNA Plasmid (h): sc-35374-SH and Filamin 1 shRNA (h) Lentiviral Particles: sc-35374-V.

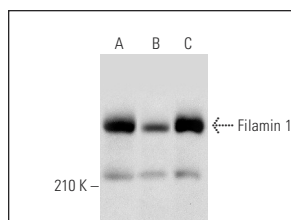
Molecular Weight of Filamin 1: 280 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

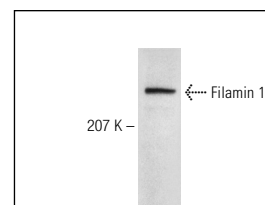
RECOMMENDED SECONDARY REAGENTS

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



Filamin 1 (N-19): sc-7565. Western blot analysis of Filamin 1 expression in U-87 MG (A), C32 (B) and HeLa (C) whole cell lysates.



Filamin 1 (N-19): sc-7565. Western blot analysis of Filamin 1 expression in A-431 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lin, R., et al. 2001. Dopamine D2 and D3 receptors are linked to the actin cytoskeleton via interaction with Filamin A. *Proc. Natl. Acad. Sci. USA* 90: 5258-5263.

MONOS
Satisfaction
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Try **Filamin 1 (E-3): sc-17749** or **Filamin 1 (PM6/317): sc-58764**, our highly recommended monoclonal alternatives to Filamin 1 (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Filamin 1 (E-3): sc-17749**.