SANTA CRUZ BIOTECHNOLOGY, INC.

Filamin 3 (C-13): sc-48499

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Filamins are Actin-binding proteins which contain an N-terminal Actin-binding domain, a membrane glycoprotein domain and a C-terminal self-association domain. Filamins help reshape the cytoskeleton by forming flexible cross-links between two Actin filaments, which maintain membrane integrity during force application. Filamins also participate in signal transduction pathways associated with cell motility, adhesion, differentiation and survival, and force transduction. The filamin family is comprised of Filamin 1, Filamin 2 and Filamin 3. Filamin 3, also designated Filamin B and β-Filamin, is a form of Filamin that plays a role in endochondral ossification, vertebral segmentation and joint formation. The interaction of Filamin 3 with Filamin 1 may allow neuroblast migration into the cortical plate from the ventricular zone. Mutations in the gene that encodes for Filamin 3, FLNB, are associated with five human skeletal disorders, specifically, autosomal dominant Larsen syndrome, spondylocarpotarsal syndrome, type I atelosteogenesis, type III atelosteogenesis and Boomerang dysplasia as well as the neurologic disorder peri-ventricular heterotopia.

REFERENCES

1. Takafuta, T., et al. 1998. Human β-Filamin is a new protein that interacts with the cytoplasmic tail of glycoprotein Ibα. J. Biol. Chem. 273: 17531-17538.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603381. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Krakow, D., et al. 2004. Mutations in the gene encoding Filamin B disrupt vertebral segmentation, joint formation and skeletogenesis. Nat. Genet. 36: 405-410.
4. Bicknell, L.S., et al. 2005. Mutations in FLNB cause boomerang dysplasia. J. Med. Genet. 42: E43.
5. Pudas, R., et al. 2005. Structural basis for vertebrate filamin dimerization. Structure 13: 111-119.

CHROMOSOMAL LOCATION

Genetic locus: FLNB (human) mapping to 3p14.3; Flnb (mouse) mapping to 14 A1.

SOURCE

Filamin 3 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Filamin 3 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, Ready P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Filamin 3 (C-13) is recommended for detection of Filamin 3 of human origin and Filamin β of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Filamin 3 (C-13) is also recommended for detection of Filamin 3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Filamin 3 siRNA (h): sc-60641, Filamin β siRNA (m): sc-60642, Filamin 3 shRNA Plasmid (h): sc-60641-SH, Filamin β shRNA Plasmid (m): sc-60642-SH, Filamin 3 shRNA (h) Lentiviral Particles: sc-60641-V and Filamin β shRNA (m) Lentiviral Particles: sc-60642-V.

Molecular Weight of Filamin 3: 280 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or U-87 MG cell lysate: sc-2411.

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) 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.

STORAGE

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

PROTOCOLS

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