SANTA CRUZ BIOTECHNOLOGY, INC.

Filamin 3 (F-8): sc-376241

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 periventricular heterotopia.

CHROMOSOMAL LOCATION

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

SOURCE

Filamin 3 (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2261-2295 near the C-terminus of Filamin 3 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 3 (F-8) is available conjugated to agarose (sc-376241 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376241 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376241 PE), fluorescein (sc-376241 FITC), Alexa Fluor® 488 (sc-376241 AF488), Alexa Fluor® 546 (sc-376241 AF546), Alexa Fluor® 594 (sc-376241 AF594) or Alexa Fluor® 647 (sc-376241 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376241 AF680) or Alexa Fluor® 790 (sc-376241 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376241 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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 for detailed protocols and support products.

APPLICATIONS

Filamin 3 (F-8) is recommended for detection of Filamin 3 of human origin and Filamin β of mouse and rat origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

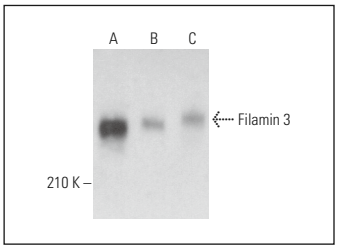
Filamin 3 (F-8) is also recommended for detection of Filamin 3 in additional species, including equine, canine and porcine.

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.

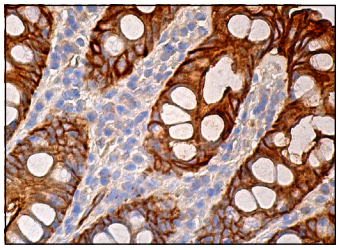
Molecular Weight of Filamin 3: 280 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

DATA



Filamin 3 (F-8): sc-376241. Western blot analysis of Filamin 3 expression in HeLa (**A**), NIH/3T3 (**B**) and C6 (**C**) whole cell lysates.



Filamin 3 (F-8): sc-376241. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Kim, Y., et al. 2014. Comparative proteomic profiling of pancreatic ductal adenocarcinoma cell lines. Mol. Cells 37: 888-898.
2. Batissoco, A.C., et al. 2018. A cell junctional protein network associated with connexin-26. Int. J. Mol. Sci. 19: 2535.
3. Greiten, J.K., et al. 2021. The role of Filamins in mechanically stressed podocytes. FASEB J. 35: e21560.
4. Zhang, M., et al. 2023. Elafibranor upregulates the EMT-inducer S100A4 via PPARβ/δ. Biomed. Pharmacother. 167: 115623.
5. Kopsidas, C.A., et al. 2024. Sustained generation of neurons destined for neocortex with oxidative metabolic upregulation upon filamin abrogation. iScience 27: 110199.

RESEARCH USE

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