SANTA CRUZ BIOTECHNOLOGY, INC.

p-Filamin 1 (Ser 2151): sc-130190

SANTA CRUZ BIOTECHNOLOGY

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 (CDl) 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 CDl 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. Upon DNA damage, Filamin 1 may be phosphorylated on Ser 2151.

REFERENCES

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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. and Kolmerer, B. 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.
7. Nakamura, F., et al. 2007. Structural basis of Filamin A functions. J. Cell Biol. 179: 1011-1025.
8. Armstrong, L.J., et al. 2008. ECSM2, an endothelial specific Filamin A binding protein that mediates chemotaxis. Arterioscler. Thromb. Vasc. Biol. 28: 1640-1646.
9. Tsuneda, S.S., et al. 2008. A new missense mutation found in the FLNA gene in a family with bilateral periventricular nodular heterotopia (BPNH) alters the splicing process. J. Mol. Neurosci. 35: 195-200.

CHROMOSOMAL LOCATION

Genetic locus: FLNA (human) mapping to Xq28.

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.

SOURCE

p-Filamin 1 (Ser 2151) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 2151 of Filamin 1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-Filamin 1 (Ser 2151) is recommended for detection of Ser 2151 phosphorylated 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)] 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 p-Filamin 1: 280 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

PROTOCOLS

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