SANTA CRUZ BIOTECHNOLOGY, INC.

Gelsolin (H-5): sc-398244

BACKGROUND

Gelsolin (also known as brevin, Actin-depolymerizing factor or ADF), a protein of leukocytes, platelets and other cells, severs Actin filaments in the presence of submicromolar calcium, thereby isolating cytoplasmic Actin gels. A calcium-independent mechanism reverses the process. A Gelsolin variant with 23 more amino-terminal amino acids is a plasma component probably involved in the clearance of Actin, the most abundant human protein, from the circulation. It has been suggested that a single gene encodes both cell and plasma Gelsolins. Gelsolin may be unique in that it is made for both secretion and intracytoplasmic location. Amino acid homology was identified between Gelsolin and the amyloid of the Finnish variety of amyloidosis. The amyloid in this disorder is antigenically and structurally related to Gelsolin. Gelsolin is the principal intracellular and extracellular Actin-severing protein. Gelsolin and Gc protein together constitute the extracellular Actin-scavenger system which prevents the toxic effects of Actin release into the extracellular space under circumstances of cell necrosis.

CHROMOSOMAL LOCATION

Genetic locus: GSN (human) mapping to 9q33.2; Gsn (mouse) mapping to 2 B.

SOURCE

Gelsolin (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 759-782 at the C-terminus of Gelsolin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398244 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.

APPLICATIONS

Gelsolin (H-5) is recommended for detection of plasma and cytoplasmic Gelsolin of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Gelsolin siRNA (h): sc-37330, Gelsolin siRNA (m): sc-37331, Gelsolin shRNA Plasmid (h): sc-37330-SH, Gelsolin shRNA Plasmid (m): sc-37331-SH, Gelsolin shRNA (h) Lentiviral Particles: sc-37330-V and Gelsolin shRNA (m) Lentiviral Particles: sc-37331-V.

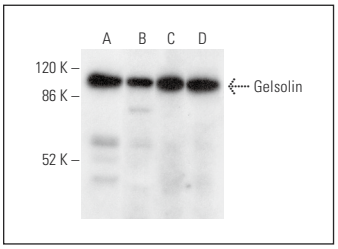
Molecular Weight of Gelsolin: 90 kDa.

Positive Controls: T-47D cell lysate: sc-2293, human smooth muscle extract: sc-363778 or human uterus extract: sc-363784.

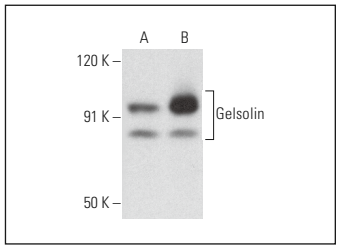
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Gelsolin (H-5): sc-398244. Western blot analysis of Gelsolin expression in T-47D (**A**) and HISM (**B**) whole cell lysates and human smooth muscle (**C**) and human uterus (**D**) tissue extracts.



Gelsolin (H-5): sc-398244. Western blot analysis of Gelsolin expression in BJAB (**A**) and HeLa (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gao, W. and Ju, Y.N. 2016. Budesonide attenuates ventilator-induced lung injury in a rat model of inflammatory acute respiratory distress syndrome. Arch. Med. Res. 47: 275-284.
2. Di Domenico, F., et al. 2016. Oxidative signature of cerebrospinal fluid from mild cognitive impairment and Alzheimer disease patients. Free Radic. Biol. Med. 91: 1-9.
3. Lanzillotta, C., et al. 2020. Proteomics study of peripheral blood mononuclear cells in Down syndrome children. Antioxidants 9: 1112.
4. Guéguinou, M., et al. 2021. Synthetic alkyl-ether-lipid promotes TRPV2 channel trafficking trough PI3K/Akt-girdin axis in cancer cells and increases mammary tumour volume. Cell Calcium 97: 102435.
5. Liu, G., et al. 2021. E2F3 promotes liver cancer progression under the regulation of circ-PRKAR1B. Mol. Ther. Nucleic Acids 26: 104-113.

RESEARCH USE

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

PROTOCOLS

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