

Gelsolin (C-18): sc-22602

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. The gene which encodes Gelsolin maps to human chromosome 9q33.2. 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.

REFERENCES

1. Lind, S.E., et al. 1984. Human plasma gelsolin binds to fibronectin. *J. Biol. Chem.* 259: 13262-13266.
2. Fernandes-Alnemri, T., et al. 1995. Mch3, a novel human apoptotic cysteine protease highly related to CPP32. *Cancer Res.* 55: 6045-6052.
3. Takahashi, A., et al. 1996. Cleavage of Lamin A by Mch2 α but not CPP32: multiple interleukin-1 β -converting enzyme-related proteases with distinct substrate recognition properties are active in apoptosis. *Proc. Natl. Acad. Sci. USA* 93: 8395-8400.
4. Rao, L., et al. 1996. Lamin proteolysis facilitates nuclear events during apoptosis. *J. Cell Biol.* 135: 1441-1455.

CHROMOSOMAL LOCATION

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

SOURCE

Gelsolin (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Gelsolin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22602 P, (100 μ g 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.

APPLICATIONS

Gelsolin (C-18) is recommended for detection of plasma and cytoplasmic Gelsolin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

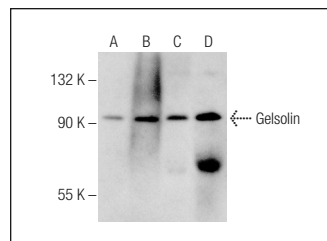
Gelsolin (C-18) is also recommended for detection of plasma and cytoplasmic Gelsolin in additional species, including equine, bovine and porcine.

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.

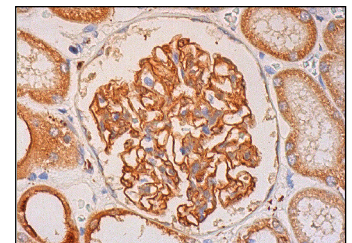
Molecular Weight of Gelsolin: 90 kDa.

Positive Controls: human smooth muscle extract: sc-363778, T-47D whole cell lysate: sc-364193 or human uterus extract: sc-363784.

DATA



Gelsolin (C-18): sc-22602. Western blot analysis of Gelsolin expression in HISM (A) and T-47D (B) whole cell lysates and human uterus (C) and human smooth muscle (D) tissue extracts.



Gelsolin (C-18): sc-22602. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and membrane staining of cells in glomeruli and cytoplasmic staining of cells in tubules.

RESEARCH USE

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

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **Gelsolin (F-5): sc-514502** or **Gelsolin (H-5): sc-398244**, our highly recommended monoclonal alternatives to Gelsolin (C-18).