



Gelsolin (m): 293T Lysate: sc-126908

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 9q34. 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 a 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.
5. Liu, X., et al. 1997. DFF, a heterodimeric protein that functions downstream of caspase-3 to trigger DNA fragmentation during apoptosis. *Cell* 89: 175-184.
6. Salvesen, G.S., et al. 1997. Caspases: intracellular signaling by proteolysis. *Cell* 91: 443-446.
7. Kothakota, S., et al. 1997. Caspase-3-generated fragment of Gelsolin: effector of morphological change in apoptosis. *Science* 278: 294-298.
8. Roustan, C., et al. 2007. Calcium-induced conformational changes in the amino-terminal half of Gelsolin. *FEBS Lett.* 581: 681-686.
9. Eun, D.W., et al. 2007. PKC ϵ is essential for Gelsolin expression by histone deacetylase inhibitor apicidin in human cervix cancer cells. *Biochem. Biophys. Res. Commun.* 354: 769-775.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Gsn (mouse) mapping to 2 B.

PRODUCT

Gelsolin (m): 293T Lysate represents a lysate of mouse Gelsolin transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Gelsolin (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Gelsolin antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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