

Gelsolin (N-18): sc-6406

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

PRODUCT

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

Blocking peptide available for competition studies, sc-6406 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Gelsolin (N-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 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).

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

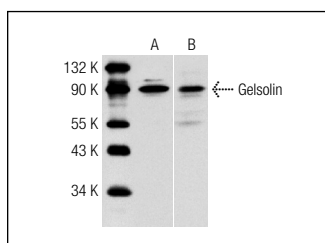
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

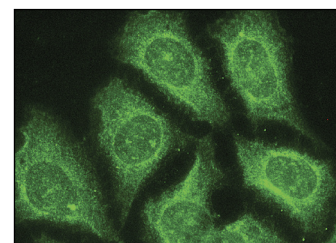
RESEARCH USE

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

DATA



Western blot analysis of Gelsolin expression in BJAB whole cell lysates (A,B). Antibodies tested include Gelsolin (C-20): sc-6405 (A) and Gelsolin (N-18): sc-6406 (B).



Gelsolin (N-18): sc-6406. Immunofluorescence staining of methanol-fixed HeLa cells showing perinuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Dong, Z., et al. 2000. Serine protease inhibitors suppress cytochrome c-mediated caspase-9 activation and apoptosis during hypoxia-reoxygenation. *Biochem. J.* 347: 669-677.
- Malina, H.Z., et al. 2003. Abnormal signalling of 14-3-3 proteins in cells with accumulated xanthurenic acid. *Biochem. Biophys. Res. Commun.* 310: 646-650.
- Cowin, A.J., et al. 2003. Differential effect of wounding on actin and its associated proteins, paxillin and gelsolin, in fetal skin explants. *J. Invest. Dermatol.* 120: 1118-1129.
- Cabello-Agüeros, J.F., et al. 2003. The role of F-actin cytoskeleton-associated gelsolin in the guinea pig capacitation and acrosome reaction. *Cell Motil. Cytoskeleton* 56: 94-108.
- Li, Q., et al. 2009. Gelsolin, but not its cleavage, is required for TNF-induced ROS generation and apoptosis in MCF-7 cells. *Biochem. Biophys. Res. Commun.* 385: 284-289.
- Amodio, N., et al. 2010. Oncogenic role of the E3 ubiquitin ligase NEDD4-1, a PTEN negative regulator, in non-small-cell lung carcinomas. *Am. J. Pathol.* 177: 2622-2634.
- Mburu, P., et al. 2010. Gelsolin plays a role in the actin polymerization complex of hair cell stereocilia. *PLoS ONE* 5: e11627.
- Hammarfjord, O., et al. 2011. Gelsolin-independent podosome formation in dendritic cells. *PLoS ONE* 6: e21615.
- Clement, C.C., et al. 2013. Protein expression profiles of human lymph and plasma mapped by 2D-DIGE and 1D SDS-PAGE coupled with nanoLC-ESI-MS/MS bottom-up proteomics. *J. Proteomics* 78: 172-187.

MONOS
Satisfaction
Guaranteed

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