

# neuroserpin (N-15): sc-20829

## BACKGROUND

Neuroserpin is an axonally secreted glycoprotein in the central nervous system (CNS) that belongs to the family of protease inhibitors known as serpins. Neuroserpin is a serine-protease inhibitor that forms SDS-stable complexes with tissue plasminogen activator (tPA), urokinase and plasmin, but not Thrombin. Human neuroserpin is a 410 amino acid protein. Neuroserpin is expressed in the neocortex, the hippocampal formation, the olfactory bulb and the amygdala in the adult CNS, and it is expressed in the cerebellum, the granule cells and a subgroup of Purkinje cells in the developing embryo. tPA expression has been linked to "neuronal plasticity", either in the developing embryo CNS or in cases of synaptic remodeling or long-term potentiation. Overexpression of tPA may promote neuronal cell death. Mutations in the gene which codes for neuroserpin are linked to hereditary dementia. Intracerebral administration of neuroserpin after stroke decreases stroke volume and diminishes the apoptotic features of the resulting ischemic penumbra.

## REFERENCES

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- Hastings, G., Coleman, T., Haudenschild, C., Stefansson, S., Smith, E., Barthlow, R., Cherry, S., Sandkvist, M. and Lawrence, D. 1997. Neuroserpin, a brain-associated inhibitor of tissue plasminogen activator is localized primarily in neurons. *J. Biol. Chem.* 272: 33062-33067.
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- Yepes, M., Sandkvist, M., Wong, M., Coleman, T., Smith, E., Cohan, S. and Lawrence, D. 2000. Neuroserpin reduces cerebral infarct volume and protects neurons from ischemia-induced apoptosis. *Blood* 96: 569-576.
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## CHROMOSOMAL LOCATION

Genetic locus: SERPINI1 (human) mapping to 3q26; Serpini1 (mouse) mapping to 3 E3.

## SOURCE

neuroserpin (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of neuroserpin of human origin.

## RESEARCH USE

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

## 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-20829 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

neuroserpin (N-15) is recommended for detection of neuroserpin 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).

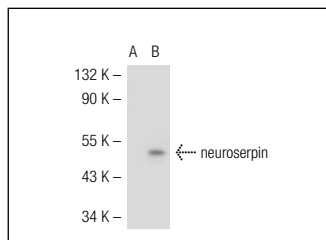
neuroserpin (N-15) is also recommended for detection of neuroserpin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for neuroserpin siRNA (h): sc-42109, neuroserpin siRNA (m): sc-42110, neuroserpin shRNA Plasmid (h): sc-42109-SH, neuroserpin shRNA Plasmid (m): sc-42110-SH, neuroserpin shRNA (h) Lentiviral Particles: sc-42109-V and neuroserpin shRNA (m) Lentiviral Particles: sc-42110-V.

Molecular Weight of neuroserpin: 55 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

## DATA



neuroserpin (N-15): sc-20829. Western blot analysis of neuroserpin expression in non-transfected: sc-117752 (A) and mouse neuroserpin transfected: sc-122022 (B) 293T whole cell lysates.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.