

neuroserpin (h): 293 Lysate: sc-158761

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. 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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2. Krueger, S., Ghisu, G., Cinelli, P., Gschwend, T., Osterwalder, T., Wolfer, D. and Sonderegger, P. 1997. Expression of neuroserpin, an inhibitor of tissue plasminogen activator, in the developing and adult nervous system of the mouse. *J. Neurosci.* 17: 8984-8996.
3. 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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5. 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 3q26.1.

PRODUCT

neuroserpin (h): 293 Lysate represents a lysate of human neuroserpin transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

neuroserpin (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive neuroserpin antibodies. Recommended use: 10-20 µl per lane.

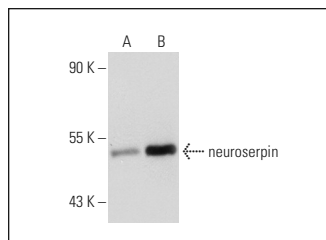
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

neuroserpin (C-9): sc-48360 is recommended as a positive control antibody for Western Blot analysis of enhanced human neuroserpin expression in neuroserpin transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



neuroserpin (C-9): sc-48360. Western blot analysis of neuroserpin expression in non-transfected: sc-110760 (A) and human neuroserpin transfected: sc-158761 (B) 293 whole cell lysates.

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.