

Nogo A (D-19): sc-11030

BACKGROUND

CNS white matter is selectively inhibitory for axonal out-growth. Nogo (also designated NI250 and Reticulon 4-A) is an oligodendrocyte-specific member of the Reticulon family and is a component of CNS white matter that inhibits axon outgrowth, induces collapse of growth cones of chick dorsal root ganglion cells, and inhibits the spreading of 3T3 fibroblasts. Other members of the reticulon protein family do not inhibit axon extension and are thought to have a role in ER function. Nogo is expressed by oligodendrocytes but not by Schwann cells, and associates primarily with the endoplasmic reticulum. Nogo exists in three different splice forms, Nogo-A, -B and -C.

REFERENCES

- Schwab, M.E. and Thoenen, H. 1985. Dissociated neurons regenerate into sciatic but not optic nerve explants in culture irrespective of neurotrophic factors. *J. Neurosci.* 5: 2415-2423.
- Schwab, M.E. and Caroni, P. 1988. Oligodendrocytes and CNS myelin are nonpermissive substrates for neurite growth and fibroblast spreading *in vitro*. *J. Neurosci.* 8: 2381-2393.
- Caroni, P. and Schwab, M.E. 1988. Two membrane protein fractions from rat central myelin with inhibitory properties for neurite growth and fibroblast spreading. *J. Cell Biol.* 106: 1281-1288.
- van de Velde, H.J., et al. 1994. NSP-encoded reticulons, neuroendocrine proteins of a novel gene family associated with membranes of the endoplasmic reticulum. *J. Cell Sci.* 107: 2403-2416.
- Spillmann, A.A., et al. 1998. Identification and characterization of a bovine neurite growth inhibitor (bNI-220). *J. Biol. Chem.* 273: 19283-19293.
- Prinjha, R., et al. 2000. Inhibitor of neurite outgrowth in humans. *Nature* 403: 383-384.
- GrandPre, T., et al. 2000. Identification of the Nogo inhibitor of axon regeneration as a Reticulon protein. *Nature* 403: 439-444.

CHROMOSOMAL LOCATION

Genetic locus: RTN4 (human) mapping to 2p16.1.

SOURCE

Nogo A (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Nogo A 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-11030 P, (100 µg 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

Nogo A (D-19) is recommended for detection of Nogo A of 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).

Suitable for use as control antibody for Nogo siRNA (h): sc-43974, Nogo shRNA Plasmid (h): sc-43974-SH and Nogo shRNA (h) Lentiviral Particles: sc-43974-V.

Molecular Weight (predicted) of Nogo variants: 130/40/22/106/42/108 kDa.

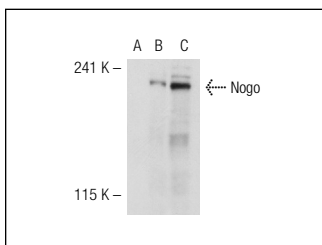
Molecular Weight (observed) of Nogo variants: 51/162-170/202-255 kDa.

Positive Controls: Nogo (h2): 293T Lysate: sc-112689, TE671 cell lysate: sc-2416 or HeLa whole cell lysate: sc-2200.

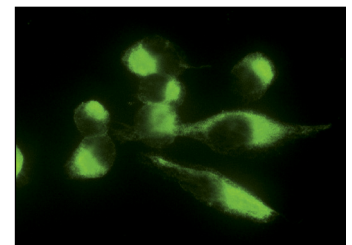
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Nogo A (D-19): sc-11030. Western blot analysis of Nogo expression in non-transfected 293T: sc-117752 (A), human Nogo transfected 293T: sc-112689 (B) and TE671 (C) whole cell lysates.



Nogo A (D-19): sc-11030. Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization.

RESEARCH USE

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

MONOS
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Try **Nogo (C-4): sc-271878**, our highly recommended monoclonal alternative to Nogo A (D-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Nogo (C-4): sc-271878**.