

# Nogo A (S-19): sc-11032

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: RTN4 (human) mapping to 2p16.1; Rtn4 (mouse) mapping to 11 A3.3.

## SOURCE

Nogo A (S-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-11032 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

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

Suitable for use as control antibody for Nogo siRNA (h): sc-43974, Nogo siRNA (m): sc-42213, Nogo shRNA Plasmid (h): sc-43974-SH, Nogo shRNA Plasmid (m): sc-42213-SH, Nogo shRNA (h) Lentiviral Particles: sc-43974-V and Nogo shRNA (m) Lentiviral Particles: sc-42213-V.

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

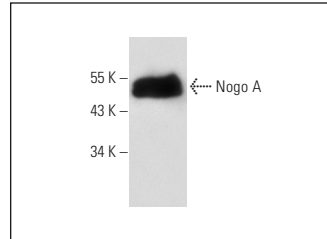
Molecular Weight (observed) of Nogo variants: 51/162-170/202-255 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or TE671 cell lysate: sc-2416.

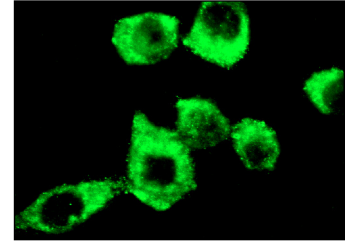
## STORAGE

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

## DATA



Nogo A (S-19): sc-11032. Western blot analysis of Nogo A expression in HeLa whole cell lysate.



Nogo A (S-19): sc-11032. Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Zhou, C., et al. 2003. HBO suppresses Nogo A, Ng-R, or Rho A expression in the cerebral cortex after global ischemia. *Biochem. Biophys. Res. Commun.* 309: 368-376.
- Woodhall, E., et al. 2003. Olfactory ensheathing cell phenotype following implantation in the lesioned spinal cord. *Cell. Mol. Life Sci.* 60: 2241-2253.
- O'Neill, P., et al. 2004. Nogo and Nogo-66 receptor in human and chick: implications for development and regeneration. *Dev. Dyn.* 231: 109-121.
- Jurewicz, A., et al. 2007. Soluble Nogo A, an inhibitor of axonal regeneration, as a biomarker for multiple sclerosis. *Neurology* 68: 283-287.
- Takeda, Y., et al. 2007. Hippocampal Nogo-A and neo-Timm's staining in amygdala kindling rats. *Neurol. Res.* 29: 199-203.
- Chytrova, G., et al. 2008. Exercise normalizes levels of MAG and Nogo A growth inhibitors after brain trauma. *Eur. J. Neurosci.* 27: 1-11.
- Liao, X.X., et al. 2011. The expression patterns of Nogo-A, myelin associated glycoprotein and oligodendrocyte myelin glycoprotein in the retina after ocular hypertension: the expression of myelin proteins in the retina in glaucoma. *Neurochem. Res.* 36: 1955-1961.
- Schanda, K., et al. 2011. Nogo-B is associated with cytoskeletal structures in human monocyte-derived macrophages. *BMC Res. Notes* 4: 6.

## RESEARCH USE

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


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