

Nogo (C-4): sc-271878

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.

CHROMOSOMAL LOCATION

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

SOURCE

Nogo (C-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 18-41 at the N-terminus of Nogo of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nogo (C-4) is available conjugated to agarose (sc-271878 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271878 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-271878 PE), fluorescein (sc-271878 FITC) or Alexa Fluor[®] 488 (sc-271878 AF488) or Alexa Fluor[®] 647 (sc-271878 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-271878 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Nogo (C-4) is recommended for detection of Nogo A, Nogo B and foonen of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Nogo (C-4) is also recommended for detection of Nogo A, Nogo B and foonen in additional species, including porcine.

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 of Nogo A: 220 kDa.

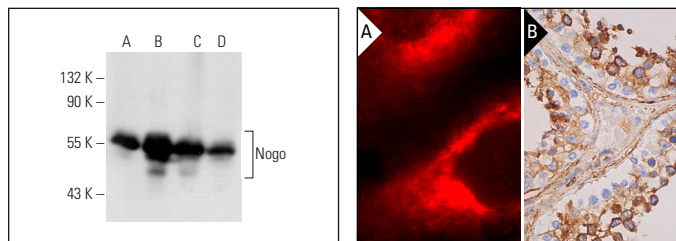
Molecular Weight of Nogo B: 55 kDa.

Molecular Weight of foonen: 29 kDa.

STORAGE

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

DATA



Nogo (C-4): sc-271878. Western blot analysis of Nogo expression in non-transfected 293: sc-110760 (A), human Nogo transfected 293: sc-111336 (B), TE671 (C) and HeLa (D) whole cell lysates.

Nogo (C-4): sc-271878. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts (B).

SELECT PRODUCT CITATIONS

- Radoshevich, L., et al. 2015. ISG15 counteracts *Listeria monocytogenes* infection. *Elife* 4: e06848.
- Yoon, G., et al. 2018. The adiponectin homolog osmotin enhances neurite outgrowth and synaptic complexity via AdipoR1/NgR1 signaling in Alzheimer's disease. *Mol. Neurobiol.* 55: 6673-6686.
- Mukherjee, R.N., et al. 2019. Reticulon 4a promotes exocytosis in mammalian cells. *Mol. Biol. Cell* 30: 2349-2357.
- Jiang, X., et al. 2020. FAM134B oligomerization drives endoplasmic reticulum membrane scission for ER-phagy. *EMBO J.* 39: e102608.
- Chen, Y.J., et al. 2020. Reticulon protects the integrity of the ER membrane during ER escape of large macromolecular protein complexes. *J. Cell Biol.* 219: e201908182.
- Gupta, H., et al. 2020. SAS-6 association with γ -Tubulin ring complex is required for centriole duplication in human cells. *Curr. Biol.* 30: 2395-2403.e4.
- Bäckström, A., et al. 2020. A sample preparation protocol for high throughput immunofluorescence of suspension cells on an adherent surface. *J. Histochem. Cytochem.* 68: 473-489.
- Nagaraj, V., et al. 2020. Application of antibodies to neuronally expressed Nogo-A increases neuronal survival and neurite outgrowth. *Int. J. Mol. Sci.* 21: 5417.
- Peña-Oyarzun, D., et al. 2020. PKD2/polycystin-2 induces autophagy by forming a complex with BECN1. *Autophagy* 17: 1714-1728.

RESEARCH USE

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