

NgBR (P-15): sc-138044

BACKGROUND

Nogo 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. 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. NgBR (Nogo-B receptor), also known as Nuclear undecaprenyl pyrophosphate synthase 1 homolog, is a 293 amino acid single-pass type I membrane protein that acts as a specific receptor for the amino-terminus of Nogo-B. Through this interaction, NgBR is involved in the regulation of vascular remodeling and angiogenesis. NgBR also enhances Niemann-Pick type C2 protein (NPC2) stabilization. Knockdown of NgBR mRNA leads to decreased NPC2 levels, which results in the hallmarks of NPC2 mutation: increased intracellular cholesterol accumulation and a loss of sterol sensing.

REFERENCES

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- Meier, S., et al. 2003. Molecular analysis of Nogo expression in the hippocampus during development and following lesion and seizure. *FASEB J.* 17: 1153-1155.
- D'Agostino, S., et al. 2006. Membrane vesicles shed by oligodendrogloma cells induce neuronal apoptosis. *Int. J. Oncol.* 29: 1075-1085.
- Miao, R.Q., et al. 2006. Identification of a receptor necessary for Nogo-B stimulated chemotaxis and morphogenesis of endothelial cells. *Proc. Natl. Acad. Sci. USA* 103: 10997-11002.
- Li, M., et al. 2007. Nogo-B receptor possesses an intrinsically unstructured ectodomain and a partially folded cytoplasmic domain. *Biochem. Biophys. Res. Commun.* 360: 128-134.
- Storch, J., et al. 2009. Niemann-Pick C2 (NPC2) and intracellular cholesterol trafficking. *Biochim. Biophys. Acta* 1791: 671-678.
- Ory, D.S. 2009. Getting a "Hold" on NPC2. *Cell Metab.* 10: 161-162.

CHROMOSOMAL LOCATION

Genetic locus: NUS1 (human) mapping to 6q22.1; Nus1 (mouse) mapping to 10 B3.

SOURCE

NgBR (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of NgBR 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-138044 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NgBR (P-15) is recommended for detection of NgBR 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).

NgBR (P-15) is also recommended for detection of NgBR in additional species, including canine, porcine and avian.

Suitable for use as control antibody for NgBR siRNA (h): sc-95494, NgBR siRNA (m): sc-149951, NgBR shRNA Plasmid (h): sc-95494-SH, NgBR shRNA Plasmid (m): sc-149951-SH, NgBR shRNA (h) Lentiviral Particles: sc-95494-V and NgBR shRNA (m) Lentiviral Particles: sc-149951-V.

Molecular Weight of full length NgBR: 33 kDa.

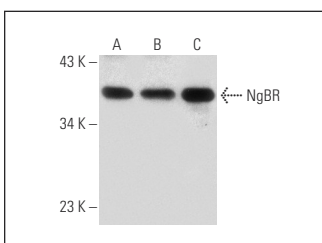
Molecular Weight of NgBR splice: 55 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, HeLa whole cell lysate: sc-2200 or SK-BR-3 cell lysate: sc-2218.

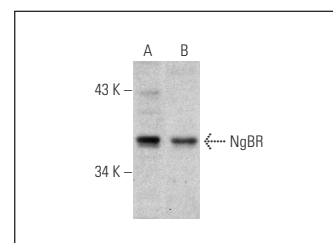
RECOMMENDED SECONDARY REAGENTS

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



NgBR (P-15): sc-138044. Western blot analysis of NgBR expression in ES-2 (A), HeLa (B) and SK-BR-3 (C) whole cell lysates.



NgBR (P-15): sc-138044. Western blot analysis of NgBR expression in HeLa (A) and MIA PaCa-2 (B) 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.

RESEARCH USE

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