SANTA CRUZ BIOTECHNOLOGY, INC.

NgBR (S-12): sc-138045

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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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2. Meier, S., Bräuer, A.U., Heimrich, B., Schwab, M.E., Nitsch, R. and Savaskan, N.E. 2003. Molecular analysis of Nogo expression in the hippocampus during development and following lesion and seizure. FASEB J. 17: 1153-1155.
3. D'Agostino, S., Salamone, M., Di Liegro, I. and Vittorelli, M.L. 2006. Membrane vesicles shed by oligodendroglioma cells induce neuronal apoptosis. Int. J. Oncol. 29: 1075-1085.
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5. Li, M. and Song, J. 2007. Nogo-B receptor possesses an intrinsically unstructured ectodomain and a partially folded cytoplasmic domain. Biochem. Biophys. Res. Commun. 360: 128-134.
6. Storch, J. and Xu, Z. 2009. Niemann-Pick C2 (NPC2) and intracellular cholesterol trafficking. Biochim. Biophys. Acta 1791: 671-678.
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CHROMOSOMAL LOCATION

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

SOURCE

NgBR (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of NgBR of human origin.

RESEARCH USE

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

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-138045 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NgBR (S-12) 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 (S-12) is also recommended for detection of NgBR in additional species, including canine.

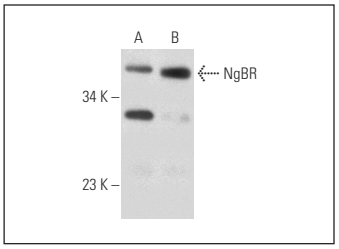
Suitable for use as control antibody for NgBR siRNA (h): sc-95494, NgBR siRNA (m): sc-149951, NgBR shRNA Plasmid (h): sc-95494-SH, NgBR shRNA Plasmid (m): sc-149951-SH, NgBR shRNA (h) Lentiviral Particles: sc-95494-V and NgBR shRNA (m) Lentiviral Particles: sc-149951-V.

Molecular Weight of full length NgBR: 33 kDa.

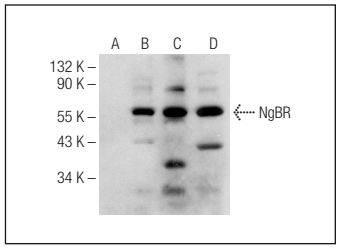
Molecular Weight of NgBR splice: 55 kDa.

Positive Controls: ES-2 cell lysate: sc-24674, HeLa whole cell lysate: sc-2200 or NgBR (h2): 293T Lysate: sc-117246.

DATA



NgBR (S-12): sc-138045. Western blot analysis of NgBR expression in ES-2 (**A**) and HeLa (**B**) whole cell lysates.



NgBR (S-12): sc-138045. Western blot analysis of NgBR expression in non-transfected 293T: sc-117752 (**A**), human NgBR transfected 293T: sc-117246 (**B**), HeLa (**C**) and SK-BR-3 (**D**) 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.