10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NogoA Antibody

Catalog # ASC10521

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9NQC3
Other Accession	NP_065393, 24431935
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	129931
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NogoA antibody can be used for detection of NogoA by Western blot at 0.5 - 1 g/mL. Despite its predicted molecular weight, NogoA typically migrates at 180 kDa in an SDS-PAGE. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	57142
Other Names	NogoA Antibody: ASY, NSP, NOGO, NOGOC, RTN-X, NOGO-A, NSP-CL, Nogo-B, Nogo-C, RTN4-A, RTN4-C, RTN4-B1, RTN4-B2, NI220/250, Nbla00271, Nbla10545, KIAA0886, My043, SP1507, Reticulon-4, Foocen, Nogo protein, reticulon 4
Target/Specificity	RTN4; At least five isoforms of Nogo are known to exist; this antibody is specific for NogoA.
Reconstitution & Storage	NogoA antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	NogoA Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RTN4 (HGNC:14085)
Function	Required to induce the formation and stabilization of endoplasmic reticulum (ER) tubules (PubMed:24262037, PubMed:25612671, PubMed:27619977). They regulate membrane morphogenesis in the ER by promoting tubular ER production (PubMed:24262037, PubMed:25612671, PubMed:27619977,

	PubMed:27786289). They influence nuclear envelope expansion, nuclear pore complex formation and proper localization of inner nuclear membrane proteins (PubMed:26906412). However each isoform have specific functions mainly depending on their tissue expression specificities (Probable).
Cellular Location	[Isoform A]: Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein; Cytoplasmic side Synapse {ECO:0000250|UniProtKB:Q99P72}. Note=Anchored to the membrane of the endoplasmic reticulum (ER) through 2 putative transmembrane domains. Localizes throughout the ER tubular network (PubMed:27619977) Co-localizes with TMEM33 at the ER sheets [Isoform C]: Endoplasmic reticulum membrane; Multi-pass membrane protein
Tissue Location	Isoform A: is specifically expressed in brain and testis and weakly in heart and skeletal muscle. Isoform B: widely expressed except for the liver. Highly expressed in endothelial cells and vascular smooth muscle cells, including blood vessels and mesenteric arteries (PubMed:15034570, PubMed:21183689). Isoform C: is expressed in brain, skeletal muscle and adipocytes. Isoform D is testis-specific.

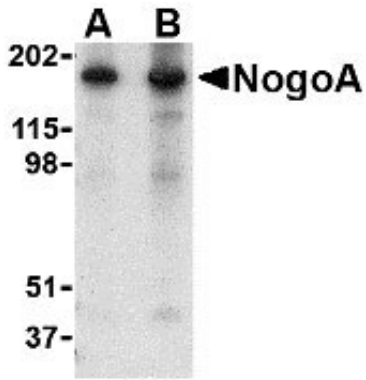
Background

NogoA Antibody: NogoA is a member of a family of integral membrane proteins termed reticulons that are thought to be involved in numerous disorders including neurodegenerative diseases. Reticulon proteins are known to regulate many cellular processes and interact with multiple proteins and receptors such as BACE. NogoA was initially identified as a myelin-associated neurite outgrowth inhibitor. It is highly expressed in oligodendrocytes in the white matter of the CNS; blocking its activity with antibodies or other factors results in improved axon regrowth and functional recovery in experimental CNS lesion models. NogoA has also been suggested to play a role in neurodegenerative diseases such as Amyotrophic lateral sclerosis, in which case NogoA is found at elevated levels in postmortem muscular samples, and multiple sclerosis (MS), in which case autoantibodies to NogoA have been found in serum and cerebrospinal fluid in MS patients.

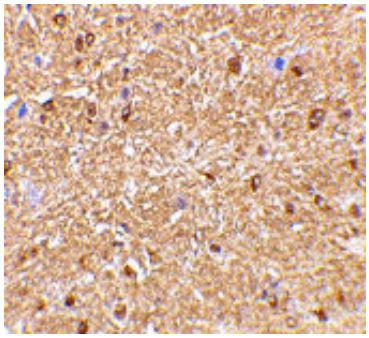
References

Yan R, ShiQ, Hu X, et al. Reticulon proteins: emerging players in neurodegenerative diseases. Cell. Mol. Life Sci.2006; 63:877-889.
Chen MS, Huber AB, van der Haar ME, et al. Nogo-A is a myelin-associated neurite outgrowth inhibitor and an antigen for monoclonal antibody IN-1. Nature2000; 403:434-9.
Schweigreiter R and Bandtlow CE. Nogo in the injured spinal cord. J. Neurotrauma2006; 3-4:384-96.
Dupuis L, Gonzalez de Aguilar JL, di Scala F, et al. Nogo provides a molecular marker for diagnosis of amyloid lateral sclerosis. Neurobiol. Dis.2002; 10:358-65.

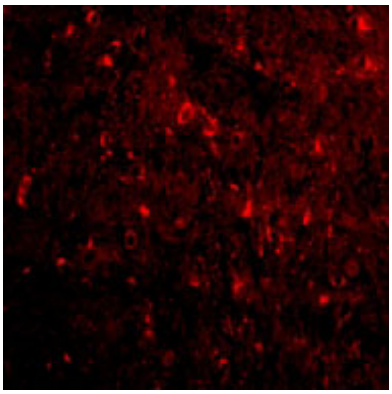
Images



Western blot analysis of NogoA in mouse brain tissue lysate with NogoA antibody at (A) 0.5 and (B) 1 µg/mL.



Immunohistochemistry of NogoA in mouse brain tissue with NogoA antibody at 2.5 µg/mL.



Immunofluorescence of NogoA in Mouse Brain cells with NogoA antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.