

**NogoA Antibody**  
**Catalog # ASC10522****Specification**

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**NogoA Antibody - Product Information**

Application	WB, IHC-P, IF, ICC, E
Primary Accession	<a href="#">Q9NQC3</a>
Other Accession	<a href="#">NP_065393</a> , <a href="#">57142</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 131 kDa
Application Notes	Observed: ~180 kDa KDa NogoA antibody can be used for detection of NogoA by Western blot at 0.5 - 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.

**NogoA Antibody - 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**

NogoA antibody was raised against a 19 amino acid synthetic peptide from near the center of human NogoA. The immunogen is located within amino acids 200 - 250 of NogoA.

**Reconstitution & Storage**

NogoA antibody can be stored at 4°C for three months and -20°C, 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.

**NogoA Antibody - Protein Information****Name** RTN4 ([HGNC:14085](#))**Function**

Required to induce the formation and stabilization of endoplasmic reticulum (ER) tubules

(PubMed:<a href="http://www.uniprot.org/citations/24262037" target="\_blank">24262037</a>, PubMed:<a href="http://www.uniprot.org/citations/25612671" target="\_blank">25612671</a>, PubMed:<a href="http://www.uniprot.org/citations/27619977" target="\_blank">27619977</a>). They regulate membrane morphogenesis in the ER by promoting tubular ER production (PubMed:<a href="http://www.uniprot.org/citations/24262037" target="\_blank">24262037</a>, PubMed:<a href="http://www.uniprot.org/citations/25612671" target="\_blank">25612671</a>, PubMed:<a href="http://www.uniprot.org/citations/27619977" target="\_blank">27619977</a>, PubMed:<a href="http://www.uniprot.org/citations/27786289" target="\_blank">27786289</a>). They influence nuclear envelope expansion, nuclear pore complex formation and proper localization of inner nuclear membrane proteins (PubMed:<a href="http://www.uniprot.org/citations/26906412" target="\_blank">26906412</a>). 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

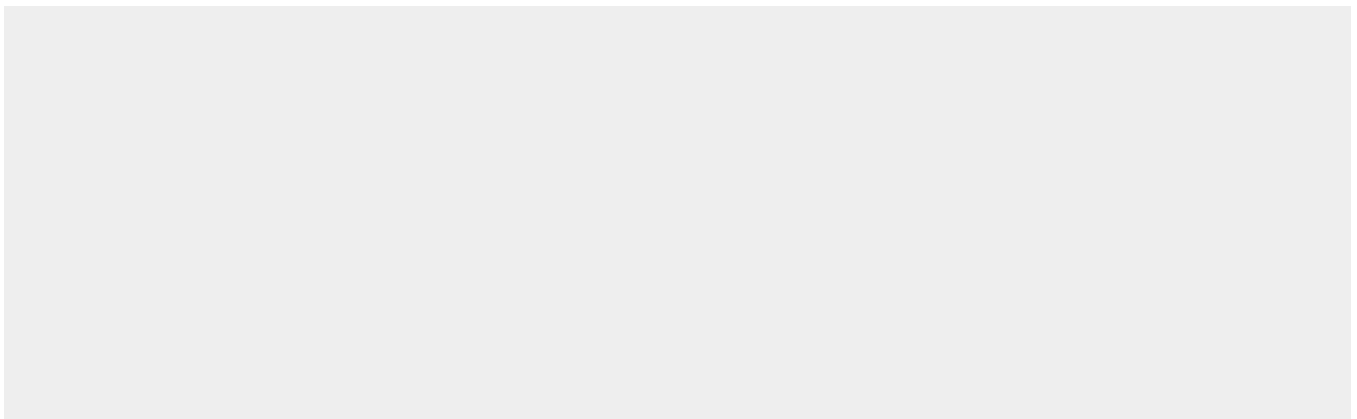
Isoform A: is specifically expressed in brain and testis and weakly in heart and skeletal muscle. Isoform B: widely expressed except for the liver. Highly expressed in endothelial cells and vascular smooth muscle cells, including blood vessels and mesenteric arteries (PubMed:15034570, PubMed:21183689). Isoform C: is expressed in brain, skeletal muscle and adipocytes. Isoform D is testis-specific.

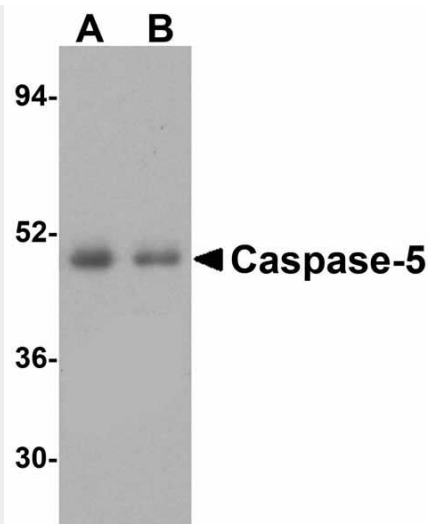
## NogoA Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

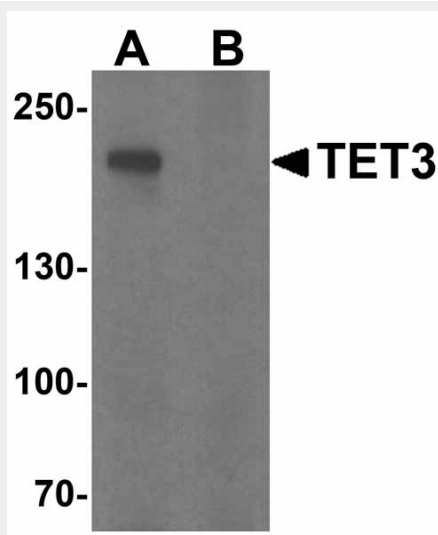
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## NogoA Antibody - Images

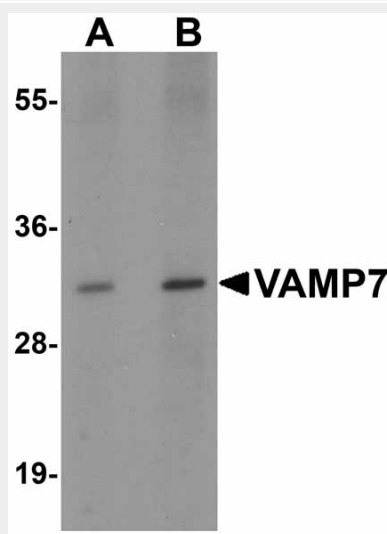




Western blot analysis of Caspase-5 in (A) human spleen tissue and (B) human thymus lysate with Caspase-5 antibody at 1  $\mu$ g/mL.



Western blot analysis of TET3 in SK-N-SH cell lysate with TET3 antibody at 1  $\mu$ g/ml in (A) the absence and (B) the presence of blocking peptide.



Western blot analysis of VAMP7 in mouse lung tissue lysate with VAMP7 antibody at (A) 0.5 and (B) 1 µg/mL.

### **NogoA Antibody - 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.

### **NogoA Antibody - 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. Nature 2000; 403:434-9.  
Schweigreiter R and Bandtlow CE. Nogo in the injured spinal cord. J. Neurotrauma 2006; 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.