

Nogo-A Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 180	Source/Isotype: Rabbit	UniProt ID: #Q9NQC3	Entrez-Gene Id: 57142
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Nogo-A Antibody recognizes endogenous levels of total Nogo-A protein. Based on sequence homology, this antibody is not expected to recognize Nogo-B or Nogo-C.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly220 of human Nogo-A protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Neurite outgrowth inhibition protein (Nogo, RTN4) is a reticulon family protein that was identified as an axonal growth inhibitor of the central nervous system (CNS). Nogo occurs as three major isoforms (Nogo-A, Nogo-B, and Nogo-C) that share a common carboxy terminus of 188 amino acids. Nogo-A is transmembrane protein enriched in the endoplasmic reticulum and expressed at high levels in the CNS, and more weakly in skeletal and heart muscle (1-3). Expression of Nogo-A decreases with increasing age during brain development. In the adult CNS, negative regulation of neuronal growth leads to stabilization of the CNS wiring at the expense of extensive plastic rearrangements. Nogo-A mediates inhibition of neurite growth together with the nogo receptor 1 (NgR1), the p75 neurotrophin receptor p75NTR, and the transmembrane LINGO1 protein. This Nogo receptor signaling complex activates the RhoA/ROCK pathway, which collapses neuronal growth cones and inhibits axonal growth in the CNS following traumatic brain injury. Research studies suggest that inhibition of Nogo A may be beneficial to patients with traumatic brain injury. Nogo-B and Nogo-C inhibit BACE1 activity and amyloid precursor protein processing, suggesting a role in cell survival (4).

Background References

1. Chen, M.S. et al. (2000) *Nature* 403, 434-9.
2. Prinjha, R. et al. (2000) *Nature* 403, 383-4.
3. GrandPré, T. et al. (2002) *Nature* 417, 547-51.
4. Schwab, M.E. (2010) *Nat Rev Neurosci* 11, 799-811.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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