

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Nogo-A in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant rat Nogo-A (aa 543-725) and recombinant human Nogo-B is observed..
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human Nogo-A Val566-Phe748 Accession # Q9NQC3
<b>Conjugate</b>	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

<b>Western Blot</b>	Optimal dilution of this antibody should be experimentally determined.
<b>Immunocytochemistry</b>	Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### BACKGROUND

Human Nogo-A (also reticulon-4) is a member of the reticulon family of transmembrane proteins. This family is characterized by the presence of a nonsignal sequence-containing N-terminus, a topologically conserved 200 amino acid (aa) C-terminus that contains two transmembrane domains with an ER-retention motif, and a punctate intracellular distribution within the ER that is reminiscent of a reticulum (1-4). In human, Nogo exists in five isoforms (5-7). The full length human form (Nogo-A) is 1192 aa in length and contains a 1018 aa N-terminus, a 21 aa transmembrane segment, a 94 aa connecting "loop", a second 21 aa transmembrane segment, and a 38 aa C-terminus. Three areas are of particular interest. One is a stretch of 66 aa within the 94 aa connecting loop. This segment is reported to bind to the GPI-linked Nogo receptor/p75 complex on axons and induce growth cone collapse (8-10). Two other areas in the N-terminus have also been discovered to have bioactivity (8, 11, 12). Based on rat, aa 57-184 in human (aa 59-172 in rat) should block fibroblast spreading, while aa 566-748 in human (aa 544-725 in rat) block neurite outgrowth and block fibroblast spreading (8, 12, 13). The exact topology of Nogo-A is unclear. The N- and C-termini may be extracellular with the "loop" region intracellular, or the situation could be reversed (13-15). Alternatively, the loop region and N-terminus may be on the same side of the membrane (3, 8). The four additional isoforms are shorter than Nogo-A (199 aa [Nogo-C], 373 aa [Nogo-B], 392 aa and 986 aa, respectively) (7). Although highly divergent, all contain the same C-terminal stretch, aa 1005-1192. Both Nogo-B and C are reported to complex with Nogo-A (16). Notably, Nogo-A is expressed in neurons, endothelial cells, oligodendrocytes, fibroblasts and myoblasts (12, 16-18). Human Nogo-A is 78% aa identical to mouse and rat Nogo-A overall, with 98% aa identity in the loop region and approximately 80% aa identity in the aa 566-748 segment.

#### PRODUCT SPECIFIC NOTICES

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