Human Nogo-A Alexa Fluor® 750-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF3515S
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	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..
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Nogo-A Val566-Phe748 Accession # Q9NQC3
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	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 reminescent 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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