ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neurite Outgrowth inhibitor protein A (Nogo-A) Antibodies

Cat. # NogoA11-P	Rat Nogo-A Control Peptide # 1	**SIZE**: 100 ug
Cat. # NogoA11-S	Rabbit Anti-Rat Nogo-A, antiserum # 1	**SIZE**: 100 ul
Cat. # NogoA11-A	Rabbit Anti-Rat Nogo-A IgG # 1 (affinity pure)	**SIZE**: 100 ug

Many tissues such as muscle, skin, liver, and peripheral nerve, have remarkable ability to repair and regrow after injury. However, the CNS (brain and spinal cord) is limited in its ability to repair or regrowth causing permanent brain damage or paralyses. Most recently an inhibitory myelin protein, **Nogo (Neurite outgrowth**), has been cloned and characterized. It may help block the regeneration of the CNS. Nogo is the 4th member of **reticulon** (**Rtn**) family. There are three alternative isoforms of Nogo, designated **Nogo-A** (full length human protein 1192 aa; calculated mol wt 135 kDa; rat 1163 aa), an intermediate form **Nogo-B** (373 aa; ~37 K, lacks 186-1004 aa within the extracellular domain), and a shorter form **Nogo-C** (199 aa; ~25 K, similar to rat vp20 and foocen-s; lacks 186-1004 aa but which has a smaller, alternative N-terminal domain). Nogo-A has a putative extracellular domain of 1024 AA, 2-3 TM domains, and a short C-terminus of 43 AA. Nogo-A is localized to the CNS-myelin, and is highly expressed in oligodendorcytes but not by Schwann cells. Nogo-B and Nogo-C have been found in several non-neuronal tissues (skeletal muscle, kidney, skin, lung, and spleen), and it may be the 35-kDa protein recognized by IN-1 antibody.

Source of Antigen and Antibodies

Antigen	18-aa peptide from **rat Nogo-A (1)**; **Designation (NogoA11-P, control or blocking peptide**) conjugated to KLH; **epitope location** ~ Mid-region Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**NogoA11**-S) and IgG, purified over antigen-agarose (Cat # **NogoA11**-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using ECL technique). The calculated mol wt of Nogo-A is ~135 kDa. However, a mol. Wt of ~180 KDa has been reported for full length Nogo-A (1).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry: Not tested**.** We recommend the use of 2-20 ug/ml of affinity pure antibody (1).

Specificity & Cross-reactivity

The rat NogoA11-P peptide sequence is 94% conserved in mouse, and 83% in human Nogo-A. However, NogoA11 epitope is not present in alternatively spliced shorter forms of Nogo-B and Nogo-C. No significant sequence homology is detected with Rtn family members. Antibody crossreactivity of NogoA11 in various species is not established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol see detailed protocol at the web site).

General References: (1) Chen MS (2000) Nature 403, 434-439; GrandPre T (2000) Nature 403; 439; Goldberg JL and Barres BA (2000) Nature 403; 369-370; Prinjha R (2000) Nature 403, 383; Tessier-Lavigne M (2000) Science 287, 813; Nagase T (1998) DNA Res. 5, 355

(2) Citations of ADI's Antibodies (see web site for updated list)

El-Helou V, 2005, Hypertension, Nov 2005; 46: 1219 - 1225, , IF
Tozaki H, 2002, Mol. Brain Res. 104, 111-119, , IHC
McPhail LT, 2004, Eur. J. Neurosci. 20, 8, 1984-1994, , IHC
Tan AM, 2006, J. Neurosci., May 2006; 26: 4729 - 4739, ,
Wang KC, 2002, Nature 417, 941-944, WB

*This product is for In vitro research use only.

NogoA11-S-A-P 71212A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com