ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neurite Outgrowth inhibitor protein A (Nogo-A/B/C) Antibodies

Cat. # NogoA12-P	Human Nogo (A-C) Control Peptide # 2	**SIZE**: 100 ug
Cat. # NogoA12-S	Rabbit Anti-Human Nogo (A-C) antiserum # 2	**SIZE**: 100 ul
Cat. # NogoA12-A	Rabbit Anti-Human Nogo (A-C) Ig G # 2 (aff 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	13-aa peptide from **human Nogo-A (1)**; **Designation (#NOGOA12-P, control/blocking peptide**) conjugated to KLH; epitope location ~ between the putative 2nd-3rd transmembrane domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**NOGOA12**-S) and IgG, purified over antigen-agarose (Cat # **NOGOA12**-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 Chemiluminescence 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). (see published refs using this antibody in 2).

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

Histochemistry: We recommend the use of 2-20 ug/ml of affinity pure IgG. (see published refs using this antibody in 2).

Specificity & Cross-reactivity

The human NogoA12-P peptide sequence is conserved in all 3 isoforms (human Nogo A-C). It is 92% identical in mouse, rat Nogo or rat foocen-m1/2 protein and 100% in monkey Nogo-A. NogoA12-P is within the 25-aa region identified for the inhibition of neurite outgrowth (1). Antibody crossreactivity of NogoA12 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 et al (2000) Nature 403, 434-439; GrandPre T et al (2000) Nature 403; 439-444; Goldberg JL and Barres BA (2000) Nature 403; 369-370; Prinjha R et al (2000) Nature 403, 383-384; Tessier-Lavigne M and Goodman CS (2000) Science 287, 813-814; Nagase T et al (1998) DNA Res. 5, 355-364

(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, ,

*This product is for In vitro research use only.

NogoA12-S-A-P 71212A

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