ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Neuroligin 4 (NLGN4**) Antibodies**

Cat # NLGN41-P	Human NLGN4 Control/Blocking Peptide	**SIZE**: 100 µg
Cat # NLGN41-A	Rabbit anti-human NLGN4 IgG (affinity pure)	**SIZE**: 100 µg

Neuroligins are Type I membrane proteins enriched in synaptic plasma membranes and clustered in synaptic clefts and postsynaptic densities. They have been characterized as neuronal cell surface proteins and are thought to be involved in cell-cell-interactions by forming intercellular junctions through binding to beta-neurexins. They play a major role in the formation or maintenance of synaptic junctions. They are also thought to be involved in the specification of excitatory synapses. Neuroligins interact with **beta-neurexins** and this interaction is involved in the formation of functional synapses.

Human **NLGN4X/Y:** 816aa; 92KDa; chromosomal location: Xp22/Yq11. NLGN4X is highly expressed in heart; expressed at lower levels in liver, skeletal muscle and pancreas and at very low levels in brain. NLGNY is expressed in fetal and adult brain, prostate and testis. Defects in NLGN4X may be the cause of susceptibility to X-linked autism 2 (AUTSX2) and X-linked Asperger syndrome 2 (ASPGX2).

Source of Antigen, Antibodies

Antigen	17- aa peptide of Human NLGN4 (Protein accession # Q8N0W4; ref. 1); designated as NLGN41-P control/blocking peptide conjugated to KLH; epitope location ~ C-terminus, extracellular
Antibody host/type	Rabbit, Polyclonal IgG (Cat # NLGN41-A), purified over antigen-Agarose
Secondary Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
Negative Control Ab	Non-immune rabbit IgG (Cat # 20009-1) to be used as –ve control for ELISA, WB, IHC etc.

Form & Storage of Antibodies/Peptide Control

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 vials for less than a week at 4oC.
Long-term: at –20^{o}C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20^{o}C or below.
Shipping: 4^{o}C for solutions and room temp for powder.

Recommended Usage

Western Blotting: 1-10 µg/ml; using affinity pure antibody (chemiluminescence technique).

ELISA: 1:100K; using 50-100 ng control peptide/well.

Histochemistry & Immunofluorescence: Not tested; we recommend the use of affinity purified antibody at 2-10 µg/ml.

Specificity & Cross-reactivity

Human NLGN41-P peptide sequence is unique to human NLGN4 protein sequence with no known counterpart in mouse or rat. Antibody cross-reactivity in various species is not known. The 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 at the web site).

General References:

(1) Nagase T., et al., (2000) DNA Res. 7: 65-73

List of related items, data sheets, and publications, using ADI antibodies is posted on the web site

*This product is for in vitro research use only.

Related material available from ADI

Antibodies to NLGN1, NLGN2 and NLGN3

NLGN41-A-P 80115J

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