10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NLGN2 Antibody
Catalog # ASC11853

Specification

NLGN2 Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q8NFZ4
Other Accession	NP_065846, 30840978
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 92, 99 kDa** **Observed: 80, 97 kDa KDa**
Application Notes	**NLGN2 antibody can be used for detection of NLGN2 by Western blot at 1 - 2 µg/ml. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

NLGN2 Antibody - Additional Information

Gene ID	**57555**

Target/Specificity
NLGN2; NLGN2 antibody is human, mouse and rat reactive. At least two isoforms are known to exist; this antibody will detect both isoforms. NLGN2 antibody is predicted to not cross-react with other members of the NLGN protein family.

Reconstitution & Storage
NLGN2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
NLGN2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

NLGN2 Antibody - Protein Information

Name NLGN2

Synonyms KIAA1366

Function
Transmembrane scaffolding protein involved in cell-cell interactions via its interactions with neurexin family members. Mediates cell-cell interactions both in neurons and in other types of cells, such as Langerhans beta cells. Plays a role in synapse function and synaptic signal transmission, especially via gamma-aminobutyric acid receptors (GABA(A) receptors). Functions by recruiting and clustering synaptic proteins. Promotes clustering of postsynaptic GABRG2 and

GPHN. Promotes clustering of postsynaptic LHFPL4 (By similarity). Modulates signaling by inhibitory synapses, and thereby plays a role in controlling the ratio of signaling by excitatory and inhibitory synapses and information processing. Required for normal signal amplitude from inhibitory synapses, but is not essential for normal signal frequency. May promote the initial formation of synapses, but is not essential for this. In vitro, triggers the de novo formation of presynaptic structures. Mediates cell-cell interactions between Langerhans beta cells and modulates insulin secretion (By similarity).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Postsynaptic cell membrane. Presynaptic cell membrane. Note=Detected at postsynaptic membranes in brain. Detected at dendritic spines in cultured neurons. Colocalizes with GPHN and ARHGEF9 at neuronal cell membranes (By similarity). Localized at presynaptic membranes in retina. Colocalizes with GABRG2 at inhibitory synapses in the retina (By similarity).

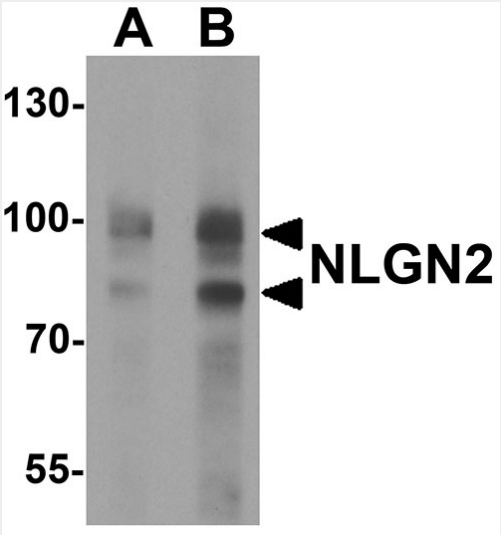
Tissue Location
Expressed in the blood vessel walls. Detected in colon, brain and pancreas islets of Langerhans (at protein level) Detected in brain, and at lower levels in pancreas islet beta cells

NLGN2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

NLGN2 Antibody - Images



Western blot analysis of NLGN2 in rat brain tissue lysate with NLGN2 antibody at (A) 1 and (B) 2 µg/ml.

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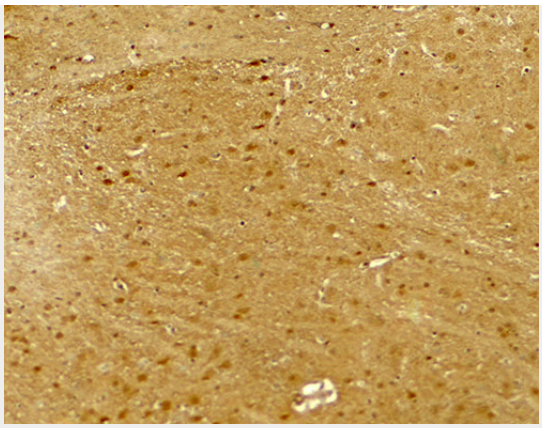
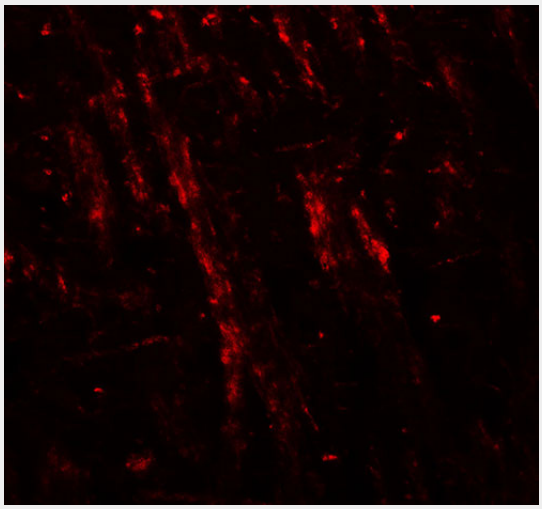


Immunohistochemistry of NLGN2 in mouse brain tissue with NLGN2 antibody at 5 µg/ml.



Immunofluorescence of NLGN2 in mouse brain tissue with NLGN2 antibody at 20 µg/ml.

NLGN2 Antibody - Background

Neuroligin 2 (NLGN2) is a member of a family of neuronal cell surface proteins that localize to the post-synaptic membrane (1,2). Neuroligins are thought to act as splice site-specific ligands for beta-neurexins and may be involved in the formation and remodeling of central nervous system synapses (2). NLGN2 has been shown to control perisomatic inhibitory synapse maturation together with gephyrin and collybistin, thereby regulating GABA receptor clustering on neurons (3,4). NLGN2 also exhibits differential functions at different types of inhibitory synapses on the same postsynaptic neuron (5).

NLGN2 Antibody - References

Ichtchenko K, Nguyen T, and Sudhof TC. Structures, alternative splicing, and neurexin binding of multiple neuroligins. J. Biol. Chem. 1996; 271:2676-82.
Bang ML and Owczarek S. A matter of balance: role of neurexin and neuroligin at the synapse. Neurochem. Res. 2013; 38:1174-89.
Poulopoulos A, Aramuni G, Meyer G, et al. Neuroligin 2 drives postsynaptic assembly at perisomatic inhibitiory synapses through gephyrin and collybistin. Neuron 2009; 63:628-42.
Jedlicka P, Hoon M, Poulopoulos T, et al. Increased dentate gyrus excitability in neuroligin-2-deficient mice in vivo. Cereb. Cortex 2011; 21:357-67.