Human Neuroligin 1 / NLGN1 Protein (His Tag)

Catalog Number: **11617-H08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

NL1

Protein Construction:

A DNA sequence encoding the human NLGN1 (NP_055747.1) extracellular domain (Met 1-Ser 677) was expressed, fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gln 46

Molecular Mass:

The recombinant human NLGN1 consists of 643 amino acids and predictes a molecular mass of 72 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhNLGN1 is approximately 85-95 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

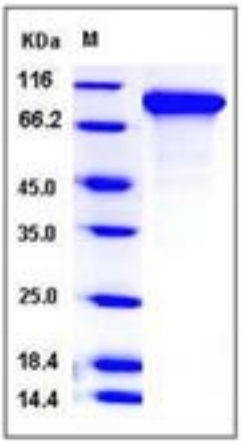
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Neuroligin 1 (NLGN1) belongs to the type-B carboxylesterase/lipase family, is a synaptic cell-adhesion molecule that is enriched in postsynaptic densities where it may recruit receptors, channels, and signal-transduction molecules to synaptic sites of cell adhesion. Neuroligins consist of five members (NLGN1, NLGN2, NLGN3, NLGN4 and NLGN4Y), which interact with beta-neurexins and this interaction is involved in the formation of functional synapses. The extracellular domain of functional Neuroligin 1 associates as a dimer when analyzed by sedimentation equilibrium. Neuroligin 1 has a unique N-linked glycosylation pattern in the neuroligin family, and glycosylation and its processing modify neuroligin activity. Neuroligin 1 is a potent trigger for the de novo formation of synaptic connections, and it has recently been suggested that it is required for the maturation of functionally competent excitatory synapses. The persistent expression of Neuroligin 1 is required for the maintenance of NMDAR-mediated synaptic transmission, which enables normal development of synaptic plasticity and long-term memory in the amygdala of adult animals.

References

1.Song JY, *et al.* (1999) Neuroligin 1 is a postsynaptic cell-adhesion molecule of excitatory synapses. Proc Natl Acad Sci U S A. 96(3): 1100-5. 2.Comoletti D, *et al.* (2003) Characterization of the interaction of a recombinant soluble neuroligin-1 with neurexin-1beta. J Biol Chem. 278(50): 50497-505. 3.Ylisaukko-oja T, *et al.* (2005) Analysis of four neuroligin genes as candidates for autism. Eur J Hum Genet. 13(12): 1285-92.