



Recombinant Protein Technical Manual  
Recombinant Human Neuroligin 1/NLGN1 Protein  
(His Tag)  
RPES0656

Product Data:

**Product SKU:** RPES0656

**Size:** 50µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_055747.1

Protein Information:

**Molecular Mass:** 72 kDa

**AP Molecular Mass:** 85-95 kDa

**Tag:** C-His

**Bio-activity:**

**Purity:** > 97 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Neuroligin; NLGN1; KIAA1070;NL1

## Immunogen Information:

**Sequence:** Met 1-Ser 677

## Background:

Neurologin 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 Neurologin 1 associates as a dimer when analyzed by sedimentation equilibrium. Neurologin 1 has a unique N-linked glycosylation pattern in the neuroligin family, and glycosylation and its processing modify neuroligin activity. Neurologin 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 Neurologin 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.