

NLGN1 Protein, Human (HEK293, C-His)

Cat. No.:	HY-P74705
Synonyms:	Neuroigin-1; NLGN1; KIAA1070
Species:	Human
Source:	HEK293
Accession:	Q8N2Q7-2/NP_055747.1 (Q46-S677)
Gene ID:	22871
Molecular Weight:	85-95 kDa

PROPERTIES

AA Sequence

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Q K L D D V D P L V   A T N F G K I R G I   K K E L N N E I L G   P V I Q F L G V P Y
A A P P T G E R R F   Q P P E P P S P W S   D I R N A T Q F A P   V C P Q N I I D G R
L P E V M L P V W F   T N N L D V V S S Y   V Q D Q S E D C L Y   L N I Y V P T E D D
I R D S G G P K P V   M V Y I H G G S Y M   E G T G N L Y D G S   V L A S Y G N V I V
I T V N Y R L G V L   G F L S T G D Q A A   K G N Y G L L D L I   Q A L R W T S E N I
G F F G G D P L R I   T V F G S G A G G S   C V N L L T L S H Y   S E G N R W S N S T
K G L F Q R A I A Q   S G T A L S S W A V   S F Q P A K Y A R M   L A T K V G C N V S
D T V E L V E C L Q   K K P Y K E L V D Q   D I Q P A R Y H I A   F G P V I D G D V I
P D D P Q I L M E Q   G E F L N Y D I M L   G V N Q G E G L K F   V E N I V D S D D G
I S A S D F D F A V   S N F V D N L Y G Y   P E G K D V L R E T   I K F M Y T D W A D
R H N P E T R R K T   L L A L F T D H Q W   V A P A V A T A D L   H S N F G S P T Y F
Y A F Y H H C Q T D   Q V P A W A D A A H   G D E V P Y V L G I   P M I G P T E L F P
C N F S K N D V M L   S A V V M T Y W T N   F A K T G D P N Q P   V P Q D T K F I H T
K P N R F E E V A W   T R Y S Q K D Q L Y   L H I G L K P R V K   E H Y R A N K V N L
W L E L V P H L H N   L N D I S Q Y T S T   T T K V P S T D I T   F R P T R K N S V P
V T S A F P T A K Q   D D
  
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Biological Activity

Measured by its binding ability in a functional ELISA. When recombinant human Neuroigin-1 is immobilized at 5 µg/mL, biotinylated recombinant human Neurexin 1 beta binds with an apparent KD is 36.43 nM.

Appearance

Lyophilized powder

Formulation

Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4 or 20 mM PB, 150 mM NaCl, pH 7.4.

Endotoxin Level

<1 EU/µg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION**Background**

Neuroigin-1 (NLGN1), a cell surface protein, actively participates in cell-cell interactions through its engagement with neurexin family members. It plays a pivotal role in synapse function and the transmission of synaptic signals, likely by recruiting and clustering various synaptic proteins. While NLGN1 may contribute to the initial formation of synapses, it is not deemed indispensable for this process. In vitro studies indicate its ability to initiate the de novo formation of presynaptic structures, suggesting involvement in the specification of excitatory synapses. Moreover, NLGN1 is crucial for maintaining the quality of wakefulness and normal synchrony of cerebral cortex activity during wakefulness and sleep. This protein's intricate interactions include binding to neurexins, specifically NRXN1, NRXN2, and NRXN3, mediated by heparan sulfate glycan modification on neurexin. Additionally, NLGN1 interacts with NLGN3, AIP1, PDZRN3, DLG4/PSD-95 (via PDZ domain 3), and GOPC, collectively contributing to its role in nervous system development.

Caution: Product has not been fully validated for medical applications. For research use only.

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