

# Human NRN1 / Neuritin 1 Protein (His Tag)

Catalog Number: 12722-H08B



**Sino Biological Inc.**  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

dJ380B8.2; MGC44811; NRN; 0710008J23Rik; Cpg15; Nrn

### Protein Construction:

A DNA sequence encoding the mature form of human NRN1 (Q9NPD7) (Met 1-Asn 115) was fused with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** Baculovirus-Insect Cells

## QC Testing

**Purity:** > 85 % 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 °C

**Predicted N terminal:** Ala 28

### Molecular Mass:

The secreted recombinant human NRN1 consists of 98 amino acids and migrates as an approximately 11 kDa band as predicted in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 8.0, 10% gly

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:

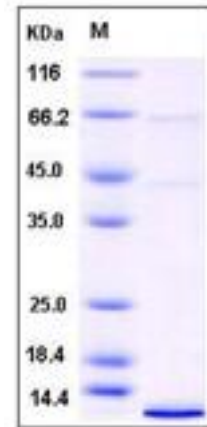
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Neuritin 1 (NRN1) is a member of neuritin family. Neuritin is a glycosylphosphatidylinositol- anchored protein induced by neural activity. It is expressed in postmitotic-differentiating neurons of the developing nervous system and a population of small-diameter neurons in the dorsal root ganglia and was anterogradely and retrogradely transported. Neuritin message is induced by neuronal activity and by the activity-regulated neurotrophins BDNF, nerve growth factor (NGF) and NT-3. Purified recombinant neuritin promotes neurite outgrowth and arborization in primary embryonic hippocampal and cortical cultures. Thus, neuritin is considered as a downstream effector of activity-induced neurite outgrowth. In clinical, neuritin levels in diabetes were reduced in both dorsal root ganglia and sciatic nerve of rats, and these deficits were reversed in vivo by treatment with NGF. This manipulation of neuritin levels in diabetes may provide a potential target for the therapeutic intervention in the management of neuropathy.

## References

- 1.Karamoysoyli E, *et al.* (2008) Neuritin mediates nerve growth factor-induced axonal regeneration and is deficient in experimental diabetic neuropathy. *Diabetes*. 57(1): 181-9.
- 2.Naev GS, *et al.* (1997) Neuritin: A gene induced by neural activity and neurotrophins that promotes neuritogenesis. *Proc Natl Acad Sci U S A*. 94(6): 2648-2653.
- 3.Kojima N, *et al.* (2005) Expression of neuritin during liver maturation and regeneration. *FEBS Lett*. 579(21): 4562-6.

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