# Mouse Nogo Receptor / NOGOR / RTN4R Protein (His Tag)

**Catalog Number:** **50106-M08H**

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Biological Solution Specialist

## General Information

**Gene Name Synonym:**

NGR; NOGOR; NgR; NgR1; NOGOR; Rtn4r

**Protein Construction:**

A DNA sequence encoding the mature form of mouse RTN4R (NP_075358.1) (Met 1-Ser 447) was expressed, fused with a polyhistidine tag at the C-terminus.

**Source:** Mouse

**Expression Host:** Human Cells

## QC Testing

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

**Bio Activity:**

**1. Measured by its binding ability in a functional ELISA. 2. Immobilized recombinant Mouse RTN4R at 2 μg/ml (100 μl/well) can bind biotinylated human RTN4 (GST Tag) with a linear range of 0.04-0.625 μg/ml.**

**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:** Cys 27

**Molecular Mass:**

The secreted mature form of mouse RTN4R consists of 432 amino acids and has a predicted molecular mass of 47 kDa. Due to glycosylation, rmRTN4R migrates as an approximately 65 kDa band in SDS-PAGE under reducing conditions.

**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:**

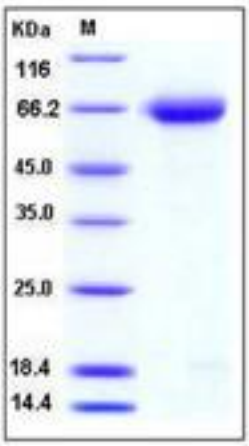
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

**Reconstitution:**

Detailed reconstitution instructions are sent along with the products.

**SDS-PAGE:**




## Protein Description

Reticulon 4 receptor (RTN4R), also known as Nogo-66 Receptor (NgR), is a glycosylphosphoinositol (GPI)-anchored protein that belongs to the Nogo recptor family including three members. Mouse RTN4R cDNA contains 10 LRP (Leucine-rich) repeats. RTN4R is expressed predominantly in neurons and their axons in the central nervous systems (CNS). As a receptor for myelin-derived proteins Nogo, myelin-associated glycoprotein (MAG), and myelin oligodendrocyte glycoprotein (OMG), RTN4R mediates axonal growth inhibition and may play a role in regulating axonal regeneration and plasticity in the adult CNS. It has been shown that RTN4R performs its inhibitory actions by interacting with the p75 neurotrophin receptor (p75NTR), a TNFRSF member also known for modulating the activities of the Trk family and for inducing apoptosis in neurons and oligodendrocytes. RTN4R may be proposed as a potential drug target for treatment of various neurological conditions such as spinal cord injury, CNS lesions, peripheral nerve injury, stroke and Alzheimer's disease (AD). Additionally, RTN4R may play a role in regulating the function of the gap junctions.

### References

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2. Wang, Y.Z. et al., 2006, Neuroreport.17(6):605-609.
3. Zhu, H.Y. et al., 2007, Hum Pathol. 38(3): 426-434.
4. David, S. et al., 2008, Trends Neurosci. 31(5): 221-226.
5. Jiang, W. et al., 2009, Transl Res. 154(1): 40-48.
6. Zhang, L. et al., 2009, J Neurosci, 9(19): 6348-6352.