Human Nogo Receptor / NOGOR / RTN4R Protein (His & Fc Tag)

Catalog Number: 10466-H03H

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

NGR; NOGOR; NgR; NgR1; NOGOR; Rtn4r

Protein Construction:

A DNA sequence encoding the mature form of human RTN4R (NP_075380.1) (Met 1-Ser 447) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to bind recombinant human RTN4 in a functional ELISA.

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 recombinant human RTN4R/Fc is a disulfide-linked homodimer. The reduced monomer consists of 669 amino acids and has a predicted molecular mass of 73 kDa. As a result of glycosylation, the apparent molecular mass of rh RTN4R/Fc monomer is approximately 100 kDa 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:

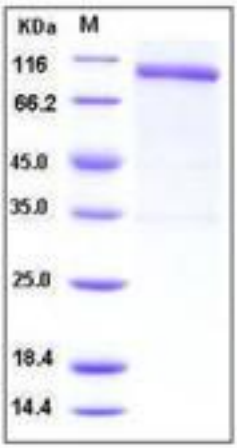
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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

1. Wang, X. et al., 2006, Ann Neurol. 60(5): 540-549.
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.
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