

Recombinant Mouse Reticulon 4 Receptor, His-tagged

Cat. No. Rtn4r-4010M **Lot. No.** (See product label)

SPECIFICATION

Product Overview

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.

Species

Mouse

Source

Mouse

ProteinLength

1-447 a.a.

Description

Reticulon 4 receptor (RTN4R), also known as Nogo-66 Receptor (NgR), is a glycosylphosphoinositol (GPI)-anchored protein that belongs to the Nogo receptor 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.

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Form	Lyophilized from sterile PBS, pH7.4
Purity	>97 % as determined by SDS-PAGE.
Endotoxin	< 1.0 EU per 1µg of the protein as determined by the LAL method.
Stability	Samples are stable for up to twelve months from date of receipt at -70µ
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.
Storage	Store it under sterile conditions at -70µ. It is recommended that the protein be aliquoted and be used as soon as possible. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	Rtn4r reticulon 4 receptor [Mus musculus]
Official Symbol	Rtn4r
Synonyms	Rtn4r; reticulon 4 receptor; NgR; NOGOR; reticulon-4 receptor; nogo receptor; Nogo-66 receptor
Gene ID	65079
mRNA Refseq	NM_022982
Protein Refseq	NP_075358

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UniProt ID	Q99PI8
Chromosome Location	16 B1
Function	protein binding; receptor activity
PDB rendering based on 1ozn.	