

Datasheet for ABIN7564921

**Reticulon 4 Protein (RTN4) (AA 1-1162) (His tag)**[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	Reticulon 4 (RTN4)
Protein Characteristics:	AA 1-1162
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Reticulon 4 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Purpose:	Custom-made recombinat Rtn4 Protein expressed in mammalian cells.
Sequence:	MEDIDQSSLV SSSADSPPRP PPAFKYQFVT EPEDEEDEED EEEEEDEDL EELEVLKRP AAGLSAAPVP PAAAPLLDFS SDSVPPAPRG PLPAAPPTAP ERQPSWERSP AASAPSLPPA AAVLPSKLPE DDEPPARPPA PAGASPLAEP AAPPSTPAAP KRRGSGSVDE TLFALPAASE PVIPSSAEKI MDLKEQPGNT VSSGQEDFPS VLFETAASLP SLSPLSTVSF KEHGYLGNLS AVASTEGTIE ETLNEASREL PERATNPFVN RESAEFSVLE YSEMSSFNNG SPKGESAMLV ENTKEEVIVR SKDKEDLVCS AALHNPQESP ATLTKVVKED GVMSPEKTMD IFNEMKMSVV APVREEYADF KPFEQAWEVK DTYEGSRDVL AARANMESKV DKKCFEDSLE QKGHGKDSSES RNENASFPRT PELVKDGSRA YITCDSFSSA TESTAANIFP VLEDHTSENK TDEKKIEERK AQIITEKTSP KTSNPFLVAI HDSEADYVTT DNLSKVTEAV VATMPEGLTP DLVQEACESE LNEATGTKIA YETKVDLVQT SEAIQESIYP TAQLCPSFEE AEATPSPVLP DIVMEAPLNS LLPSTGASVA QPSASPLEVP SPVSYDGIKL EPENPPPYEE AMSVALKTSD SKEEIKEPES

## Product Details

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FNAAAQEAEA PYISACDLI KETKLSTEPS PEFSNYSEIA KFEKSVPDHC ELVDDSSPES  
EPVDFLSDDS IPEVPQTQEE AVMLMKESLT EVSETVTQHK HKERLSASPQ EVGKPYLESF  
QPNLHITKDA ASNEIPTLTK KETISLQMEE FNTAIYSNDD LLSSKEDKMK ESETFSDSSP  
IEIIDEFPTF VSAKDDSPKE YTDLEVSNKS EIANVQSGAN SLPCSELPCD LSFKNTPYK  
EAHVSDEFK SRSSVSKVPL LLPNVSALES QIEMGNIVKP KVLTKAEEEK LPSDTEKEDR  
SLTAVLSAEL NKTSVVDLLY WRDIKKTGVV FGASLFLLLS LTVFSIVSVT AYIALALLSV  
TISFRIYKGV IQAIQKSDEG HPPFRAYLESE VAISEELVQK YSNSALGHVN STIKELRRLF  
LVDDLVDLTK FAVLMWVFTY VGALFNGLTL LILALISLFS IPVIYERHQA QIDHYLGLAN  
KSVKDAMAKI QAKIPGLKRK AE **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

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### Purity:

> 90 % as determined by Bis-Tris Page, Western Blot

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### Grade:

custom-made

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## Target Details

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### Target:

Reticulon 4 (RTN4)

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### Alternative Name:

Rtn4 ([RTN4 Products](#))

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### Background:

Reticulon-4 (Neurite outgrowth inhibitor) (Nogo protein),FUNCTION: Required to induce the formation and stabilization of endoplasmic reticulum (ER) tubules. They regulate membrane

morphogenesis in the ER by promoting tubular ER production. They influence nuclear envelope expansion, nuclear pore complex formation and proper localization of inner nuclear membrane proteins. However each isoform have specific functions mainly depending on their tissue expression specificities. {ECO:0000250|UniProtKB:Q9NQC3}, FUNCTION: [Isoform A]: Developmental neurite growth regulatory factor with a role as a negative regulator of axon-axon adhesion and growth, and as a facilitator of neurite branching. Regulates neurite fasciculation, branching and extension in the developing nervous system (PubMed:20573699). Involved in down-regulation of growth, stabilization of wiring and restriction of plasticity in the adult CNS (By similarity). Regulates the radial migration of cortical neurons via an RTN4R-LINGO1 containing receptor complex (PubMed:20573699). Acts as a negative regulator of central nervous system angiogenesis. Inhibits spreading, migration and sprouting of primary brain microvascular endothelial cells (MVECs). Also induces the retraction of MVECs lamellipodia and filopodia in a ROCK pathway-dependent manner (PubMed:23625008).

{ECO:0000250|UniProtKB:Q9NQC3, ECO:0000269|PubMed:20573699, ECO:0000269|PubMed:23625008}, FUNCTION: [Isoform B]: Mainly function in endothelial cells and vascular smooth muscle cells, is also involved in immune system regulation (Probable). Modulator of vascular remodeling, promotes the migration of endothelial cells but inhibits the migration of vascular smooth muscle cells (PubMed:15034570). Regulates endothelial sphingolipid biosynthesis with direct effects on vascular function and blood pressure. Inhibits serine palmitoyltransferase, SPTLC1, the rate-limiting enzyme of the novo sphingolipid biosynthetic pathway, thereby controlling production of endothelial sphingosine-1-phosphate (S1P) (PubMed:26301690). Required to promote macrophage homing and functions such as cytokine/chemokine gene expression involved in angiogenesis, arteriogenesis and tissue repair (PubMed:19805174). Mediates ICAM1 induced transendothelial migration of leukocytes such as monocytes and neutrophils and acute inflammation (PubMed:21183689). Necessary for immune responses triggered by nucleic acid sensing TLRs, such as TLR9, is required for proper TLR9 location to endolysosomes (PubMed:25917084). Also involved in immune response to LPS (PubMed:26174362). Plays a role in liver regeneration through the modulation of hepatocytes proliferation (PubMed:23299899). Reduces the anti-apoptotic activity of Bcl-xl and Bcl-2. This is likely consecutive to their change in subcellular location, from the mitochondria to the endoplasmic reticulum, after binding and sequestration. With isoform C, inhibits BACE1 activity and amyloid precursor protein processing (By similarity).

{ECO:0000250|UniProtKB:Q9NQC3, ECO:0000269|PubMed:15034570, ECO:0000269|PubMed:19805174, ECO:0000269|PubMed:21183689, ECO:0000269|PubMed:23299899, ECO:0000269|PubMed:25917084, ECO:0000269|PubMed:26174362, ECO:0000269|PubMed:26301690, ECO:0000305},

## Target Details

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FUNCTION: [Isoform C]: Regulates cardiomyocyte apoptosis upon hypoxic conditions (PubMed:27763637). With isoform B, inhibits BACE1 activity and amyloid precursor protein processing (By similarity). {ECO:0000250|UniProtKB:Q9NQC3, ECO:0000269|PubMed:27763637}.

Molecular Weight: 126.6 kDa

UniProt: [Q99P72](#)

Pathways: [Neurotrophin Signaling Pathway](#), [Regulation of Cell Size](#), [SARS-CoV-2 Protein Interactome](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months