

**RTN4 Blocking Peptide (N-Term)**  
**Synthetic peptide**  
**Catalog # BP21919a****Specification****RTN4 Blocking Peptide (N-Term) - Product Information**

Primary Accession [Q9NOC3](#)  
Other Accession [Q99P72](#), [Q9JK11](#)

**RTN4 Blocking Peptide (N-Term) - Additional Information**

**Gene ID** 57142

**Other Names**

Reticulon-4, Foocen, Neurite outgrowth inhibitor, Nogo protein, Neuroendocrine-specific protein, NSP, Neuroendocrine-specific protein C homolog, RTN-x, Reticulon-5, RTN4, KIAA0886, NOGO

**Target/Specificity**

The synthetic peptide sequence is selected from aa 48-58 of HUMAN RTN4

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**RTN4 Blocking Peptide (N-Term) - Protein Information**

**Name** RTN4 ([HGNC:14085](#))

**Function**

Required to induce the formation and stabilization of endoplasmic reticulum (ER)

**RTN4 Blocking Peptide (N-Term) - Background**

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. Involved in down-regulation of growth, stabilization of wiring and restriction of plasticity in the adult CNS. Regulates the radial migration of cortical neurons via an RTN4R-LINGO1 containing receptor complex (By similarity). Isoform 2 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. Isoform 2 and isoform 3 inhibit BACE1 activity and amyloid precursor protein processing.

**RTN4 Blocking Peptide (N-Term) - References**

Yang J.,et al.Cytogenet. Cell Genet. 88:101-102(2000).  
Prinjha R.,et al.Nature 403:383-384(2000).  
Tagami S.,et al.Oncogene 19:5736-5746(2000).  
Zhou Z.M.,et al.Reproduction 123:227-234(2002).  
Oertle T.,et al.J. Mol. Biol. 325:299-323(2003).

tubules (PubMed:<a href="http://www.uniprot.org/citations/27619977" target="\_blank">27619977</a>, PubMed:<a href="http://www.uniprot.org/citations/25612671" target="\_blank">25612671</a>, PubMed:<a href="http://www.uniprot.org/citations/24262037" target="\_blank">24262037</a>). They regulate membrane morphogenesis in the ER by promoting tubular ER production (PubMed:<a href="http://www.uniprot.org/citations/27619977" target="\_blank">27619977</a>, PubMed:<a href="http://www.uniprot.org/citations/25612671" target="\_blank">25612671</a>, PubMed:<a href="http://www.uniprot.org/citations/24262037" target="\_blank">24262037</a>, PubMed:<a href="http://www.uniprot.org/citations/27786289" target="\_blank">27786289</a>). They influence nuclear envelope expansion, nuclear pore complex formation and proper localization of inner nuclear membrane proteins (PubMed:<a href="http://www.uniprot.org/citations/26906412" target="\_blank">26906412</a>). However each isoform have specific functions mainly depending on their tissue expression specificities (Probable).

### **Cellular Location**

[Isoform A]: Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein; Cytoplasmic side Note=Anchored to the membrane of the endoplasmic reticulum (ER) through 2 putative transmembrane domains. Localizes throughout the ER tubular network (PubMed:27619977). Co-localizes with TMEM33 at the ER sheets [Isoform C]: Endoplasmic reticulum membrane; Multi-pass membrane protein

### **Tissue Location**

Isoform A: is specifically expressed in brain and testis and weakly in heart and skeletal muscle. Isoform B: widely expressed except for the liver. Highly expressed in endothelial cells and vascular smooth muscle cells, including blood vessels and mesenteric arteries (PubMed:15034570, PubMed:21183689). Isoform C: is expressed in brain, skeletal muscle and adipocytes.

Isoform D is testis-specific.

### **RTN4 Blocking Peptide (N-Term) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)