

Mouse Ntrk1 Blocking Peptide (Center)
Synthetic peptide
Catalog # BP20893a**Specification****Mouse Ntrk1 Blocking Peptide (Center) - Product Information**

Primary Accession [Q3UFB7](#)
Other Accession [P35739](#)

Mouse Ntrk1 Blocking Peptide (Center) - Additional Information

Gene ID 18211

Other Names

High affinity nerve growth factor receptor,
Neurotrophic tyrosine kinase receptor type 1, Ntrk1

Target/Specificity

The synthetic peptide sequence is selected from aa 481-495 of HUMAN Ntrk1

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.

Mouse Ntrk1 Blocking Peptide (Center) - Protein Information

Name Ntrk1

Function

Receptor tyrosine kinase involved in the development and the maturation of the central and peripheral nervous systems through regulation of proliferation,

Mouse Ntrk1 Blocking Peptide (Center) - Background

Receptor tyrosine kinase involved in the development and the maturation of the central and peripheral nervous systems through regulation of proliferation, differentiation and survival of sympathetic and nervous neurons. High affinity receptor for NGF which is its primary ligand, it can also bind and be activated by NTF3/neurotrophin-3. However, NTF3 only supports axonal extension through NTRK1 but has no effect on neuron survival. Upon dimeric NGF ligand-binding, undergoes homodimerization, autophosphorylation and activation. Recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that regulate distinct overlapping signaling cascades driving cell survival and differentiation. Through SHC1 and FRS2 activates a GRB2-Ras-MAPK cascade that regulates cell differentiation and survival. Through PLCG1 controls NF-Kappa-B activation and the transcription of genes involved in cell survival. Through SHC1 and SH2B1 controls a Ras- PI3 kinase-AKT1 signaling cascade that is also regulating survival. In absence of ligand and activation, may promote cell death, making the survival of neurons dependent on trophic factors.

Mouse Ntrk1 Blocking Peptide (Center) - References

Carninci P.,et al.Science
309:1559-1563(2005).
Smeyne R.J.,et al.Nature 368:246-249(1994).
Fagan A.M.,et al.J. Neurosci.
16:6208-6218(1996).
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differentiation and survival of sympathetic and nervous neurons. High affinity receptor for NGF which is its primary ligand, it can also bind and be activated by NTF3/neurotrophin-3. However, NTF3 only supports axonal extension through NTRK1 but has no effect on neuron survival. Upon dimeric NGF ligand-binding, undergoes homodimerization, autophosphorylation and activation. Recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that regulate distinct overlapping signaling cascades driving cell survival and differentiation. Through SHC1 and FRS2 activates a GRB2-Ras-MAPK cascade that regulates cell differentiation and survival. Through PLCG1 controls NF-Kappa-B activation and the transcription of genes involved in cell survival. Through SHC1 and SH2B1 controls a Ras-PI3 kinase-AKT1 signaling cascade that is also regulating survival. In absence of ligand and activation, may promote cell death, making the survival of neurons dependent on trophic factors.

Cellular Location

Cell membrane

{ECO:0000250|UniProtKB:P35739};

Single-pass type I membrane protein

{ECO:0000250|UniProtKB:P35739} Early endosome membrane; Single-pass type I membrane protein. Late endosome membrane

{ECO:0000250|UniProtKB:P35739};

Single-pass type I membrane protein

{ECO:0000250|UniProtKB:P35739}.

Recycling endosome membrane

{ECO:0000250|UniProtKB:P35739};

Single-pass type I membrane protein

{ECO:0000250|UniProtKB:P35739}.

Note=Internalized to endosomes upon binding of NGF or NTF3 and further

transported to the cell body via a retrograde axonal transport. Localized at cell membrane and early endosomes before nerve growth factor (NGF) stimulation.

Recruited to late endosomes after NGF stimulation. Colocalized with RAPGEF2 at late endosomes.

{ECO:0000250|UniProtKB:P35739}

Mouse Ntrk1 Blocking Peptide (Center) - Protocols

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

- [Blocking Peptides](#)