

## Recombinant Mouse Ntrk2 Protein, His-tagged

Cat. No. Ntrk2-7290M Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Mouse Ntrk2 protein with a His tag was expressed in insect cells.
<b>Species</b>	Mouse
<b>Source</b>	Insect Cells
<b>ProteinLength</b>	32-429
<b>Description</b>	<p>Receptor tyrosine kinase involved in the development and the maturation of the central and the peripheral nervous systems through regulation of neuron survival, proliferation, migration, differentiation, and synapse formation and plasticity. Receptor for BDNF/brain-derived neurotrophic factor and NTF4/neurotrophin-4. Alternatively can also bind NTF3/neurotrophin-3 which is less efficient in activating the receptor but regulates neuron survival through NTRK2. Upon 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. Through SHC1, FRS2, SH2B1, SH2B2 activates the GRB2-Ras-MAPK cascade that regulates for instance neuronal differentiation including neurite outgrowth. Through the same effectors controls the Ras-PI3 kinase-AKT1 signaling cascade that mainly regulates growth and survival. Through PLCG1 and the downstream protein kinase C-regulated pathways controls synaptic plasticity. Thereby, plays a role in learning and memory by regulating both short term synaptic function and long-term potentiation. PLCG1 also leads to NF-Kappa-B activation and the transcription of genes involved in cell</p>

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survival. Hence, it is able to suppress anoikis, the apoptosis resulting from loss of cell-matrix interactions. Isoform GP95-TRKB may also play a role in neutrophin-dependent calcium signaling in glial cells and mediate communication between neurons and glia.

**Form**

Liquid

**Molecular Mass**

45.7 kDa

**AA Sequence**

CPTSCCKCSSARIWCTEPPSPGIVAFPRLEPNSVDPENITEILIANQKRLEIINEDDVEAYV  
 GLRNLTIVDSGLKFVAYKAFKNSNLRHINFTRNKLTSLSRHFHRLDLSLILTGNPF  
 TCSCDIMWLKTLQETKSSPDTQDLYCLNESSKNMPLANLQIPNCGLPSARLAAPNLT  
 VEEGKSVTLSCSVGGDPLPTLYWDVGNLVSKHMNETSHTQGSLRITNISSDDSGKQI  
 SCVAENLVGEDQDSVNLTVHFAPTITFLESPTSDDHHWCIPFTVRGNPKPALQWFYN  
 GAILNESKYICTKIHVTNHTEYHGCLQLDNPTHMNGDYTLMAKNEYGKDERQISAH  
 FMGRPGVDYETNPNYPEVLYEDWTTPTDIGDTTNKSNEIPSTDVADQSNREHAAAL  
 EHHHHHH

**Endotoxin**

< 1.0 EU/μg of protein (determined by LAL method)

**Purity**

> 95 % by SDS-PAGE

**Stability**

Shelf life: one year from despatch.

**Storage**

Store undiluted at 2-8 centigrade for one week or (in aliquots) at -20 to -80 centigrade for longer. Avoid repeated freezing and thawing.

**Concentration**


0.5 mg/mL (determined by absorbance at 280nm)

**Storage Buffer**

Phosphate Buffered Saline (pH 7.4) containing 10 % glycerol.

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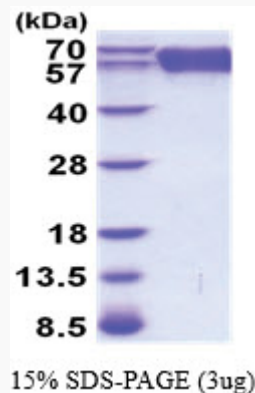
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## GENE INFORMATION

<b>Gene Name</b>	Ntrk2 neurotrophic tyrosine kinase, receptor, type 2 [ <i>Mus musculus</i> (house mouse) ]
<b>Official Symbol</b>	Ntrk2
<b>Synonyms</b>	Ntrk2; neurotrophic tyrosine kinase, receptor, type 2; Tkr; trk; Tkrb; trkB; trk-B; GP145-TrkB/GP95-TrkB; BDNF/NT-3 growth factors receptor; neurotrophic tyrosine receptor kinase type 2; trkB tyrosine kinase; EC 2.7.10.1
<b>Gene ID</b>	18212
<b>mRNA Refseq</b>	NM_001025074
<b>Protein Refseq</b>	NP_001020245
<b>UniProt ID</b>	P15209

### SDS-PAGE



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