

Recombinant Mouse Ntrk2 Protein, His-tagged

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

SPECIFICATION

Product Overview	Recombinant Mouse Ntrk2 protein with a His tag was expressed in insect cells.
Species	Mouse
Source	Insect Cells
ProteinLength	32-429
Description	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

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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	CPTSCCKCSSARIWCTEPPSGIVAFPRLEPNSVDPENITEILIANQKRLEIINEDDVEAYV GLRNLTIVD SGLKFVAYKAFLKNSNLRHINFTRNKLTSLSRHRHRLDLSDLILTGNPF TCSCDIMWLKTLQETKSSPDTQDLYCLNESSKNMPLANLQIPNCGLPSARLAAPNLT VEEGKSVTLSCSVGGDPLPTLYWDVGNLVSKHMNETSHTQGSLRITNISSDDSGKQI SCVAENLVGEDQDSVNLTVHFAPTITFLESPTSDHHWCIPFTVRGNPKPALQWFYN GAILNESKYICTKIHVTNHTEYHGCLQLDNPTHMNNGDYTLMAKNEYGKDERQISAH 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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GENE INFORMATION

Gene Name Ntrk2 neurotrophic tyrosine kinase, receptor, type 2 [Mus musculus (house mouse)]

Official Symbol Ntrk2

Synonyms 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

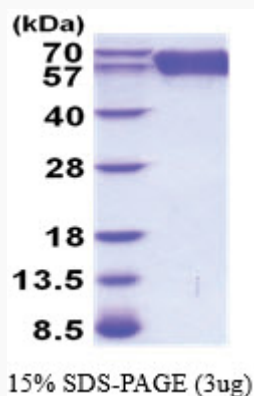
Gene ID 18212

mRNA Refseq NM_001025074

Protein Refseq NP_001020245

UniProt ID P15209

SDS-PAGE



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