

TrkC Protein, Mouse, Recombinant (His)

General Information

Synonyms:	TrkC;Ntrk3_tv3;AW125844;neurotrophic tyrosine kinase, receptor, type 3
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse TrkC (NP_032772.3) (Met 1-Thr 429) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Cys 32
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q6VNS1-1
Molecular Weight:	46.1 kDa (predicted); 100-110 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized mouse NTRK3-His at 10 µg/ml (100 µl/well) can bind biotinylated human NT3 , The EC50 of biotinylated human NT3 is 0.04-0.08 µg/ml.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

NT-3 growth factor receptor is also known as neurotrophic tyrosine kinase receptor type 3 or TrkC tyrosine kinase or Trk-C receptor, is a member of the neurotrophic tyrosine receptor kinase (NTRK) family. This kinase is a membrane-bound receptor that, upon neurotrophin binding, phosphorylates itself and members of the MAPK pathway. TrkC/NTRK3 is widely expressed in the developing and adult nervous system. In later embryonic development, TrkC/NTRK3 is expressed in various structures of the CNS including the caudate-putamen, septal

nuclei, cerebellum, and brainstem. Other neurotrophins include nerve growth factor (NGF), neurotrophin-3 and neurotrophin-4. In the PNS, the *trkC* hybridization appears to correlate, both temporally and spatially, with the outgrowth of axons toward their peripheral targets. *TrkC/NTRK3* is widely expressed in the three identified branches of the mammalian nervous system and appears to correlate with the expression of NT-3, its cognate ligand. The apparent colocalization of *trkC* transcripts with NT-3 raises the possibility this neurotrophin exerts its trophic effects by a paracrine and/or autocrine mechanism. Signaling through this kinase leads to cell differentiation and may play a role in the development of proprioceptive neurons that sense body position. Mutations in the *TrkC* encoding gene have been associated with medulloblastomas, secretory breast carcinomas, and other cancers. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

Tessarollo L, et al. (1993) *trkC*, a receptor for neurotrophin-3, is widely expressed in the developing nervous system and in non-neuronal tissues. *Development*. 118(2): 463-75.

Lamballe F, et al. (1994) Developmental expression of *trkC*, the neurotrophin-3 receptor, in the mammalian nervous system. *J Neurosci*. 14(1): 14-28.

Klein R, et al. (1994) Disruption of the neurotrophin-3 receptor gene *trkC* eliminates Ia muscle afferents and results in abnormal movements. *Nature*. 368(6468): 249-51.

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