Data Sheet (Cat.No.TMPY-00944)

TargetMol

TrkC Protein, Human, Recombinant (His & hFc)

General Information

Synonyms:	TRKC;neurotrophic tyrosine kinase, receptor, type 3;gp145(trkC)
Protein Construction:	A DNA sequence encoding the extracellular domain (Met1-Asp428) of human TrkC (NP_001007157.1) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus. Predicted N terminal: Cys 32
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q16288-2
Molecular Weight:	72.5 kDa (predicted); 110-120 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized human TrKc-Fch at 10 μg/ml (100 μl/well) can bind biotinylated human NT3 , The EC50 of biotinylated human NT3 is 23.4-54.6 ng/ml.
Purity:	> 98 % 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 includenerve 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 ImmunotherapyImmune CheckpointImmunotherapyTargeted 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 la muscle afferents and results in abnormal movements. Nature. 368(6468): 249-51.

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