Human TrkC / NTRK3 Protein (His Tag)

Catalog Number: **10048-H08H**

General Information

Gene Name Synonym:

gp145(trkC); TRKC

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Asp 428) of human TrkC (NP_001007157.1) was expressed with a C-terminal polyhistide tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Immobilized human Trkc-His at 10 μg/ml (100 μl/well) can bind biotinylated human NT3 (Cat:10286-HNA), The EC_{50} of biotinylated human NT3 (Cat:10286-HNA) is 0.03-0.07 μg/ml.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Cys 32

Molecular Mass:

The recombinant human TrkC consists of 408 amino acids and has a calculated molecular mass of 46.1 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 80-90 kDa protein in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

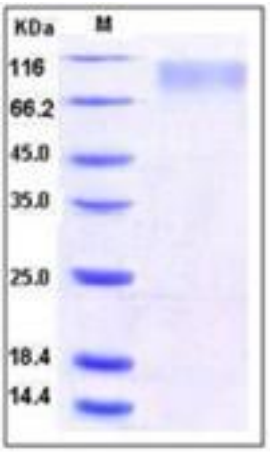
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

NT-3 growth factor receptor 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 caudatoputamen, septal nuclei, cerebellum, and brainstem. Other neurotrophins include , neurotrophin-3 and neurotrophin-4. In the PNS, 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. Signalling through this kinase leads to cell differentiation and may play a role in the development of proprioceptive neurons that sense body position. Mutations in TrkC encoding gene have been associated with medulloblastomas, secretory breast carcinomas and other cancers.

References

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