Human TrkB / NTRK2 Protein (His & Fc Tag)

Catalog Number: **10047-H03H**

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

GP145-TrkB; GP145-TrkB/GP95-TrkB; Tkrb; trk-B; TRKB; GP145-TrkB/GP95-TrkB; Tkrb; trk-B; trkB

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-His 430) of human TrkB (NP_001007098.1) precursor was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the carboxy-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to bind mouse BDNF in functional ELISA.

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 TrkB/Fc is a disulfide-linked homodimer. The reduced monomer consists of 646 amino acids and has a predicted molecular mass of 72 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhTrkB/Fc monomer is approximately 110-120 kDa due to glycosylation.

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:

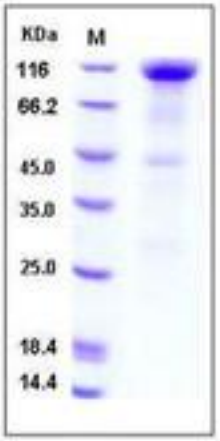
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

TrkB receptor also known as TrkB tyrosine kinase or BDNF/NT-3 growth factors receptor or neurotrophic tyrosine kinase, receptor, type 2 (NTRK2) is a single transmembrane catalytic receptors with intracellular tyrosine kinase activity. TrkB/NTRK2 is a member of the neurotrophic tyrosine receptor kinase (NTRK) family. TrkB tyrosine kinase (TrkB) or NTRK2 is coupled to the Ras, Cdc42/Rac/RhoG, MAPK, PI3-K and PLCgamma signaling pathways. There are four members of the Trk family; TrkA, TrkB and TrkC and a related p75NTR receptor. Each family member binds different neurotrophins with varying affinities. TrkB/NTRK has highest affinity for brain-derived neurotrophic factor (BDNF) and is involved in neuronal plasticity, longterm potentiation and apoptosis of CNS neurons. Other neurotrophins include nerve growth factor(NGF), neurotrophin-3 and neurotrophin-4. TrkB/NTRK is a membrane-bound receptor that, upon neurotrophin binding, phosphorylates itself and members of the MAPK pathway. Signalling through this kinase leads to cell differentiation. Mutations in TrkB/NTRK have been associated with obesity and mood disorders.

References

1.Klein R, *et al*. (1990) The trkB tyrosine protein kinase gene codes for a second neurogenic receptor that lacks the catalytic kinase domain. Cell. 61 (4): 647-56.
2.Rose CR, *et al*. (2003) Truncated TrkB-T1 mediates neurotrophin-evoked calcium signalling in glia cells. Nature. 426 (6962): 74-8.
3.Yamada K, *et al*. (2004) Brain-derived neurotrophic factor/TrkB signaling in memory processes. J Pharmacol Sci. 91 (4): 267-70.