# Recombinant Human TrkB/NTRK2 Protein (His Tag)(Active)



Catalog Number: PKSH031917

Note: Centrifuge before opening to ensure complete recovery of vial contents.

## **Description**

Synonyms BDNF/NT-3 Growth Factors Receptor; GP145-TrkB; Trk-B; Neurotrophic

Tyrosine Kinase Receptor Type 2; TrkB Tyrosine Kinase; Tropomyosin-Related

Kinase B; NTRK2; TRKB

Species Human

Expression Host HEK293 Cells
Sequence Met 1-His 430
Accession NP\_001007098.1

Calculated Molecular Weight45.7 kDaObserved molecular weight70-80 kDaTagC-His

**Bioactivity** Measured by its ability to bind Mouse/Human BDNF Protein (Native) in a

functional ELISA.

# **Properties**

Purity > 97 % as determined by reducing SDS-PAGE.
 Endotoxin < 1.0 EU per μg as determined by the LAL method.</li>

Storage Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C.

Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of

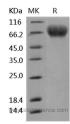
reconstituted samples are stable at < -20°C for 3 months.

**Shipping** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation** Lyophilized from sterile PBS, pH 7.4

**Reconstitution** Please refer to the printed manual for detailed information.

#### Data



## **Background**

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

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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.

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