

# Recombinant Human Trk-B/NTRK2 Protein

Catalog No.: RP00290 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	4915	Q16620

### Tags

C-His

### Synonyms

NTRK2; GP145-TrkB; TRKB; trk-B; BDNF/NT-3 growth factors receptor; GP145-TrkB; TRKB; trk-B; TrkB; OBHD

## Product Information

Source	Purification
HEK293 cells	> 97% by SDS-PAGE.

Calculated MW	Observed MW
45.05 kDa	55-70 kDa

### Endotoxin

< 1.0 EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## 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 kinase (NTRK) family and contains two Ig-like C2-type (immunoglobulin-like) domains, two LRR (leucine-rich) repeats, one LRRCT domain, one LRRNT domain, one protein kinase domain. TrkB/NTRK2 tyrosine kinase is coupled to the Ras, Cdc42/Rac/RhoG, MAPK, PI3-K and PLCγ signaling pathways. TrkB/NTRK has high affinity for brain-derived neurotrophic factor (BDNF) and is involved in neuronal plasticity, longterm potentiation and apoptosis of CNS neurons. As a membrane-bound receptor, TrkB/NTRK binds upon neurotrophin, phosphorylates itself and members of the MAPK pathway. NTRK2 / TrkB involved in the development and the maturation of the central and the peripheral nervous systems through regulation of neuron survival, proliferation, migration, differentiation, and synapse formation and plasticity. Mutations in TrkB/NTRK have been associated with obesity and mood disorders.

## Basic Information

### Description

Recombinant Human Trk-B/NTRK2 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Cys32-His430) of human TrkB (Accession #NP\_001018074.1) fused with a 6×His tag at the C-terminus.

### Bio-Activity

Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human TrkB, His Tag at 2 μg/mL (100 μL/well) can bind Recombinant Human BDNF with a linear range of 1.95-258 ng/mL.

### Storage

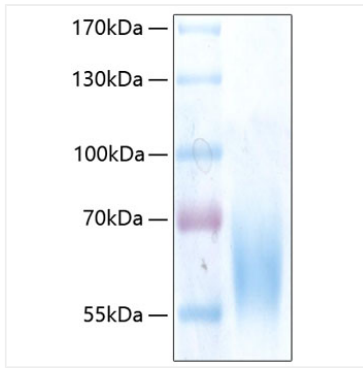
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

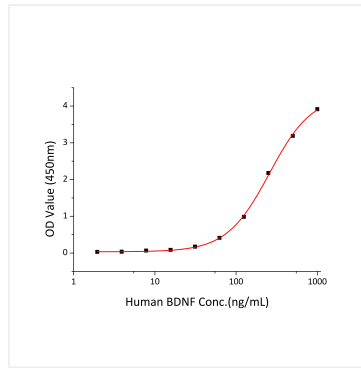
Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human Trk-B/NTRK2 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 55-70 kDa.



Recombinant Human TrkB (Catalog: RP00290) at 2 $\mu$ g/mL (100  $\mu$ L/well) can bind Recombinant Human BDNF (Catalog: RP01243) with a linear range of 1.95-258ng/mL.