



# Recombinant Protein Technical Manual

**Recombinant Rat TrkB/NTRK2 Protein (His Tag)(Active)**  
RPES0133

## Product Data:

**Product SKU:** RPES0133

**Size:** 20µg

**Species:** Rat

**Expression host:** HEK293 Cells

**Uniprot:** Q63604-Isoform T1

## Protein Information:

**Molecular Mass:** 47.1 kDa

**AP Molecular Mass:** 67 kDa

**Tag:** C-His

**Bio-activity:** Measured by its binding ability in a functional ELISA. Immobilized rat NTRK2-His at 10 µg/ml (100 µl/well) can bind biotinylated mouse BDNF, The EC50 of biotinylated mouse BDNF is 12.2-28.6 ng/ml.

**Purity:** > 95 % as determined by SDS-PAGE

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

**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.

**Application:** Functional ELISA

**Synonyms:** NTRK2;Trkb

## Immunogen Information:

**Sequence:** Met1-His429

## 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 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.