

# Canine TrkB / NTRK2 Protein (His Tag)

Catalog Number: 70035-D08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

NTRK2

### Protein Construction:

A DNA sequence encoding the canine NTRK (XP\_541264.2) (Met1-His430) was expressed with a C-terminal polyhistidine tag.

**Source:** Canine

**Expression Host:** HEK293 Cells

## QC Testing

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

### Bio Activity:

**Measured by its binding ability in a functional ELISA.**

**Immobilized canine NTRK-His at 10 µg/ml (100 µl/well) can bind biotinylated mouse BDNF (cat:50240-MNAS). The EC<sub>50</sub> of biotinylated mouse BDNF (cat:50240-MNAS) is 0.07-0.17 µg/ml.**

### Endotoxin:

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

**Predicted N terminal:** Cys 32

### Molecular Mass:

The recombinant canine NTRK comprises 410 amino acids and has a predicted molecular mass of 45.6 kDa. The apparent molecular mass of the protein is approximately 66-76 kDa in SDS-PAGE under reducing conditions 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

### Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

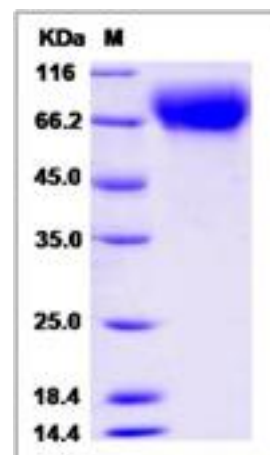
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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 , 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.