



Datasheet for ABIN5510593

TRKB ELISA Kit



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1 Image

Overview

Quantity: 96 tests

Target: TRKB (NTRK2)

Binding Specificity: AA 32-430

Reactivity: Human

Method Type: Sandwich ELISA

Application: ELISA

Product Details

Purpose: Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human TrkB

Brand: PicoKine™

Analytical Method: Quantitative

Detection Method: Colorimetric

Specificity: Expression system for standard: NSO
Immunogen sequence: C32-H430

Cross-Reactivity (Details): There is no detectable cross-reactivity with other relevant proteins.

Characteristics: Tissue Specificity: Isoform TrkB is expressed in the central and peripheral nervous system. In the central nervous system (CNS), expression is observed in the cerebral cortex, hippocampus, thalamus, choroid plexus, granular layer of the cerebellum, brain stem, and spinal cord. In the peripheral nervous system, it is expressed in many cranial ganglia, the ophthalmic nerve, the vestibular system, multiple facial structures, the submaxillary glands, and dorsal root ganglia. Isoform TrkB-T1 is mainly expressed in the brain but also detected in other tissues including

pancreas, kidney and heart. Isoform TrkB-T-Shc is predominantly expressed in the brain. .

Target Details

Target: TRKB (NTRK2)

Alternative Name: NTRK2 ([NTRK2 Products](#))

Background: Protein Function: Receptor tyrosine kinase 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. Receptor for BDNF/brain-derived neurotrophic factor and NTF4/neurotrophin- 4. Alternatively can also bind NTF3/neurotrophin-3 which is less efficient in activating the receptor but regulates neuron survival through NTRK2. Upon ligand-binding, undergoes homodimerization, autophosphorylation and activation. Recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that regulate distinct overlapping signaling cascades. Through SHC1, FRS2, SH2B1, SH2B2 activates the GRB2-Ras-MAPK cascade that regulates for instance neuronal differentiation including neurite outgrowth. Through the same effectors controls the Ras-PI3 kinase-AKT1 signaling cascade that mainly regulates growth and survival. Through PLCG1 and the downstream protein kinase C-regulated pathways controls synaptic plasticity. Thereby, plays a role in learning and memory by regulating both short term synaptic function and long-term potentiation. PLCG1 also leads to NF-Kappa-B activation and the transcription of genes involved in cell survival. Hence, it is able to suppress anoikis, the apoptosis resulting from loss of cell-matrix interactions. May also play a role in neurotrophin- dependent calcium signaling in glial cells and mediate communication between neurons and glia. .

Background: TrkB receptor also known as TrkB tyrosine kinase or BDNF/NT-3 growth factors receptor or neurotrophic tyrosine kinase, receptor, type 2 is a protein that in humans is encoded by the NTRK2 gene.[1] TrkB is the high affinity catalytic receptor for several "neurotrophins", which are small protein growth factors that induce the survival and differentiation of distinct cell populations. The TrkB receptor is part of the large family of receptor tyrosine kinases. A "tyrosine kinase" is an enzyme which is capable of adding a phosphate group to certain tyrosines on target proteins, or "substrates".Soppet et al. [2] demonstrated that the gp145 gene product of the TRKB gene is rapidly phosphorylated on tyrosine residues upon exposure to BDNF and NTF3.

Synonyms: BDNF/NT-3 growth factors receptor,2.7.10.1,GP145-TrkB,Trk-B,Neurotrophic tyrosine kinase receptor type 2,TrkB tyrosine kinase,Tropomyosin-related kinase B,NTRK2,TRKB,

Target Details

Full Gene Name: BDNF/NT-3 growth factors receptor

Cellular Localisation: Cell membrane, Single-pass type I membrane protein. Endosome membrane, Single-pass type I membrane protein . Internalized to endosomes upon ligand-binding..

UniProt: [Q16620](#)

Pathways: [RTK Signaling](#), [Neurotrophin Signaling Pathway](#), [cAMP Metabolic Process](#), [Skeletal Muscle Fiber Development](#), [Feeding Behaviour](#), [Dicarboxylic Acid Transport](#)

Application Details

Plate: Pre-coated

Restrictions: For Research Use only

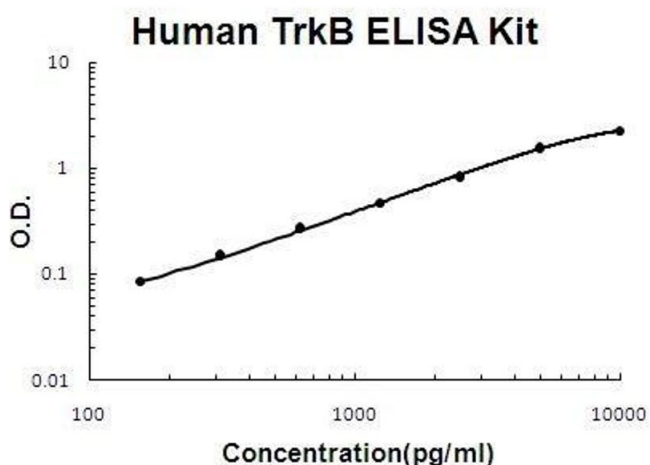
Handling

Storage: 4 °C,-20 °C

Storage Comment: Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles(Shipped with wet ice.)

Expiry Date: 12 months

Images



ELISA

Image 1. Human TrkB PicoKine ELISA Kit standard curve