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TrkB Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10439

Specification

TrkB Antibody - Product Information

Application	**WB, IF, IP**
Primary Accession	Q63604
Reactivity	**Human, Mouse, Rat, Chicken**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**92186**

TrkB Antibody - Additional Information

Gene ID 25054

Application & Usage	**Western blotting (0.5-4 µg/ml), immunofluorescence (5-10 µg/ml). However, the optimal concentrations should be determined individually. Trk protein exists as variably glycosylated entities with the major forms having molecular weights of 140 kDa, 110 kDa, and the unglycosylated form of 80 kDa.**

Other Names
NTRK2 , GP145-TrkB , TRKB , Trk-B , tyrosine receptor kinase

Target/Specificity
TrkB

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.2 mg/ml) immunoaffinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
TrkB Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TrkB Antibody - Protein Information

Name Ntrk2

Synonyms Trkb

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 neutrophin-dependent calcium signaling in glial cells.

Cellular Location
Cell membrane; Single-pass type I membrane protein Endosome membrane {ECO:0000250|UniProtKB:P15209}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P15209}. Early endosome membrane {ECO:0000250|UniProtKB:P15209}. Cell projection, axon. Cell projection, dendrite. Cytoplasm, perinuclear region. Postsynaptic density {ECO:0000250|UniProtKB:P15209}. Note=Internalized to endosomes upon ligand-binding. {ECO:0000250|UniProtKB:P15209}

Tissue Location
Widely expressed in the central and peripheral nervous system. The different forms are differentially expressed in various cell types. Isoform T2 is primarily expressed in neurons

TrkB Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TrkB Antibody - Images

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TrkB Antibody - Background

Due to the various splice variants, the trk proteins exist as variably glycosylated entities with the major forms having molecular weights of 140-145 kDa, 110 kDa and the unglycosylated form of 80 kDa. trkB contains 33.3% carbohydrate by weight representing modification on 10 of 12 N-glycosylation sites. The primary ligand for trkB is BDNF which induces the phosphorylation of the protein and subsequent binding of PLC-gamma via SH2 domains. TrkB may function to modulate neuronal responses to the neurotrophins acting thro µgh trkB such as BDNF.