

Anti-Phospho-TrkB (Y817) NTRK2 Rabbit Monoclonal Antibody

Catalog # ABO13129

Product Information

Application	WB, IHC, IF, ICC, IP
Primary Accession	Q16620
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-Phospho-TrkB (Y817) NTRK2 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

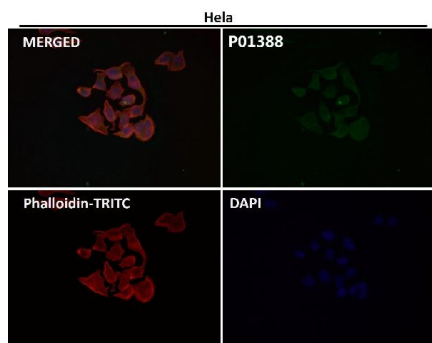
Gene ID	4915
Other Names	BDNF/NT-3 growth factors receptor, 2.7.10.1, GP145-TrkB, Trk-B, Neurotrophic tyrosine kinase receptor type 2, TrkB tyrosine kinase, Tropomyosin-related kinase B, NTRK2, TRKB
Calculated MW	91999
Application Details	WB 1:500-1:1000 IHC 1:50-1:100 ICC/IF 1:50-1:100 IP 1:30
Subcellular Localization	Cell membrane; Single-pass type I membrane protein. Endosome membrane ; Single-pass type I membrane protein. Internalized to endosomes upon ligand-binding..
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..
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium

azide and 50% glycerol, 0.4-0.5mg/ml BSA.

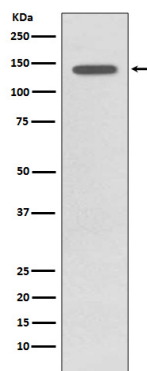
Clone Names	Clone: EGA-14
Immunogen	A synthesized peptide derived from human Phospho-TrkB (Y817)
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

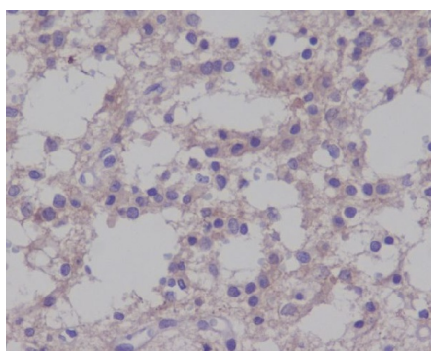
Name	NTRK2
Synonyms	TRKB
Function	Receptor tyrosine kinase involved in the development and the maturation of the central and the peripheral nervous systems through regulation of neuron survival, proliferation, migration, differentiation, and synapse formation and plasticity (By similarity). Receptor 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 (PubMed:15494731, PubMed:7574684). Upon ligand- binding, undergoes homodimerization, autophosphorylation and activation (PubMed:15494731). 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 and mediate communication between neurons and glia.
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 {ECO:0000250 UniProtKB:Q63604}. Cell projection, dendrite {ECO:0000250 UniProtKB:Q63604}. Cytoplasm, perinuclear region {ECO:0000250 UniProtKB:Q63604}. Postsynaptic density {ECO:0000250 UniProtKB:P15209}. Note=Internalized to endosomes upon ligand-binding. {ECO:0000250 UniProtKB:P15209}
Tissue Location	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.



Immunofluorescent analysis using the Antibody at 1:50 dilution.



Western blot analysis of Phospho-TrkB (Y817) expression in SH-SY5Y cell lysate treated with BDNF.



Immunohistochemical analysis of paraffin-embedded mouse brain cancer, using Phospho-TrkB (Y817) Antibody.

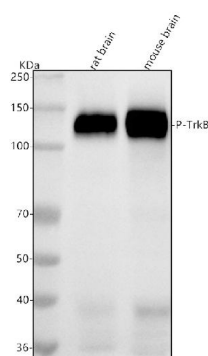


Figure 1. Western blot analysis of TrkB using anti-TrkB antibody (P01388).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: rat brain tissue lysates,

Lane 2: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-TrkB antigen affinity purified monoclonal antibody (Catalog # P01388) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for TrkB at

approximately 130 kDa. The expected band size for TrkB is at 92 kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.