

Anti-TrkB Rabbit Monoclonal Antibody

Catalog # ABO15632

Product Information

Application	WB, IHC, IP
Primary Accession	P15209
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-TrkB Rabbit Monoclonal Antibody . Tested in WB, IHC, IP applications. This antibody reacts with Mouse, Rat.

Additional Information

Gene ID	18212
Other Names	BDNF/NT-3 growth factors receptor, 2.7.10.1, GP145-TrkB/GP95-TrkB, Trk-B, Neurotrophic tyrosine kinase receptor type 2, TrkB tyrosine kinase, Ntrk2 {ECO:0000312 MGI:MGI:97384}
Calculated MW	92133
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 IP 1:50
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 Immunogen	Clone: 22N08 A synthesized peptide derived from human TrkB
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 {ECO:0000312 MGI:MGI:97384}
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. Isoform GP95-TRKB may also play a role in neurotrophin-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; Single-pass type I membrane protein. Early endosome membrane. Cell projection, axon {ECO:0000250|UniProtKB:Q63604}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q63604}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:Q63604}. Postsynaptic density. Note=Internalized to endosomes upon ligand-binding.

Tissue Location

Expressed in the brain, in neurons (at protein level) (PubMed:23977241). Detected in hippocampus (at protein level) (PubMed:27457814). Widely expressed in the central and peripheral nervous system. The different forms are differentially expressed in various cell types. Isoform GP95-TRKB is specifically expressed in glial cells.

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