Rabbit Trk B Polyclonal Antibody | anti-NTRK2 antibody

Phospho-Trk B (Tyr515) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321750	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

Trk B; Polyclonal Antibody; Phospho-Trk B (Tyr515) Antibody; AI848316; BDNF tropomyosine receptor kinase B; BDNF/NT 3 growth factors receptor; BDNF/NT-3 growth factors receptor; Brain derived neurotrophic factor receptor; C030027L06Rik; EC 2.7.10.1; GP145 TrkB; GP145-TrkB; GP145-TrkB/GP95-TrkB; GP95 TrkB; Neurotrophic receptor tyrosine kinase 2; Neurotrophic tyrosine kinase receptor type 2; Neurotrophin receptor tyrosine kinase type 2; NTRK 2; Ntrk2; NTRK2_HUMAN; Obesity; hyperphagia; and developmental delay; included; RATTRKB1; Tkrb; Trk-B; TRKB; TrkB tyrosine kinase; TRKB1; Tropomyosin related kinase B; tyrosine kinase receptor B; Tyrosine receptor kinase B; anti-NTRK2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-Trk B (Tyr515) antibody detects endogenous levels of Trk B only when phosphorylated at Tyrosine 515
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	477
Applicable Applications for anti-NTRK2 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Trk B around the phosphorylation site of Tyrosine 515
Subcellular Location	Membrane.
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.
Predicted Cross Reactivity	**Pig, Horse, Sheep, Rabbit, Chicken**
Similarity	Pig (100%), Horse (100%), Sheep (100%), Rabbit (100%), Chicken (100%)
Conjugation	Unconjugated
Epitope	Phospho Tyr515
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

IF (Immunofluorescence)
AAA321750 staining NIH-3T3 cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.

IHC (Immunohistochemisry)
AAA321750 at 1/100 staining human brain tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

WB (Western Blot)
Western blot analysis of Phospho-Trk B (Tyr515) expression in various lysates

WB (Western Blot)
Western blot analysis of Trk B phosphorylation expression in NIH-3T3 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-NTRK2 antibody	Description: This gene encodes a member of the neurotrophic tyrosine receptor kinase (NTRK) family. This kinase 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. 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 and mediate communication between neurons and glia. Subunit Structure: Exists in a dynamic equilibrium between monomeric (low affinity) and dimeric (high affinity) structures. Interacts (phosphorylated upon activation by BDNF) with SHC1; mediates SHC1 phosphorylation and activation. Interacts (phosphorylated upon activation by BDNF) with PLCG1 and/or PLCG2; mediates PLCG1 phosphorylation and activation. Interacts with SH2B1 and SH2B2. Interacts with NGFR; may regulate the ligand specificity of the receptor. Interacts (phosphorylated upon ligand-binding) with SH2D1A; regulates NTRK2. Interacts with SQSTM1 and KIDINS220 (By similarity). Interacts (phosphorylated upon ligand-binding) with FRS2; activates the MAPK signaling pathway. Interacts with APPL1 (By similarity). Post-translational Modifications: Phosphorylated. Undergoes ligand-mediated autophosphorylation that is required for interaction with SHC1 and PLCG1 and other downstream effectors. Isoform TrkB-T-Shc is not phosphorylated. Ubiquitinated. Undergoes polyubiquitination upon activation; regulated by NGFR. Ubiquitination regulates the internalization of the receptor (By similarity). Similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	55956790
NCBI GeneID	4915
NCBI Accession #	NP_001007098.1
NCBI GenBank Nucleotide #	NM_001007097.2

UniProt Accession #	Q16620; Q16675; Q59GJ1; Q8WXJ5; Q8WXJ6; Q8WXJ7; B1ANZ4; B4DFV9
Molecular Weight	Observed: 145 kDa Predicted: 92 kDa
NCBI Official Full Name	BDNF/NT-3 growth factors receptor isoform b
NCBI Official Synonym Full Names	neurotrophic receptor tyrosine kinase 2
NCBI Official Symbol	NTRK2
NCBI Official Synonym Symbols	OBHD; TRKB; trk-B; EIEE58; GP145-TrkB
NCBI Protein Information	BDNF/NT-3 growth factors receptor
UniProt Protein Name	BDNF/NT-3 growth factors receptor
UniProt Gene Name	**NTRK2**
UniProt Synonym Gene Names	TRKB; Trk-B

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
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