

Product Name: Trk A (phospho Tyr496) Rabbit Polyclonal Antibody
Catalog #: APRab05579

Summary

Production Name	Trk A (phospho Tyr496) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IF-P,IF-F,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	NTRK1
Alternative Names	NTRK1; MTC; TRK; TRKA; High affinity nerve growth factor receptor; Neurotrophic tyrosine kinase receptor type 1; TRK1-transforming tyrosine kinase protein; Tropomyosin-related kinase A; Tyrosine kinase receptor; Tyrosine kinase receptor A;
Gene ID	4914.0
SwissProt ID	P04629.The antiserum was produced against synthesized peptide derived from human Trk A around the phosphorylation site of Tyr496. AA range:471-520

Application

Dilution Ratio	WB 1:500-2000, IF-P/IF-F/ICC/IF 1:200-1:1000, ELISA 1:5000.Not yet tested in other
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applications.

Molecular Weight 140-180kDa

Background

This gene encodes a member of the neurotrophic tyrosine kinase receptor (NTRK) family. This kinase is a membrane-bound receptor that, upon neurotrophin binding, phosphorylates itself and members of the MAPK pathway. The presence of this kinase leads to cell differentiation and may play a role in specifying sensory neuron subtypes. Mutations in this gene have been associated with congenital insensitivity to pain, anhidrosis, self-mutilating behavior, mental retardation and cancer. Alternate transcriptional splice variants of this gene have been found, but only three have been characterized to date. [provided by RefSeq, Jul 2008], alternative products: Both isoforms have similar biological properties, catalytic activity: ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate., caution: The sequence shown here is derived from an Ensembl automatic analysis pipeline and should be considered as preliminary data., disease: Chromosomal aberrations involving NTRK1 are a cause of thyroid papillary carcinoma (PACT) [MIM:188550]. Intrachromosomal rearrangement that links the protein kinase domain of NTRK1 to the 5'-end of the TPR gene forms the fusion protein TRK-T1. TRK-T1 is a 55 kDa protein reacting with antibodies against the C-terminus of the NTRK1 protein., disease: Chromosomal aberrations involving NTRK1 are a cause of thyroid papillary carcinoma (PACT) [MIM:188550]. Translocation t(1;3)(q21;q11) with TFG generates the TRKT3 (TRK-T3) transcript by fusing TFG to the 3'-end of NTRK1; a rearrangement with TPM3 generates the TRK transcript by fusing TPM3 to the 3'-end of NTRK1., disease: Defects in NTRK1 are a cause of congenital insensitivity to pain with anhidrosis (CIPA) [MIM:256800]. CIPA is characterized by a congenital insensitivity to pain, anhidrosis (absence of sweating), absence of reaction to noxious stimuli, self-mutilating behavior, and mental retardation. This rare autosomal recessive disorder is also known as congenital sensory neuropathy with anhidrosis or hereditary sensory and autonomic neuropathy type IV or familial dysautonomia type II., domain: The extracellular domain mediates interaction with NGFR., domain: The transmembrane domain mediates interaction with KIDINS220., function: Required for high-affinity binding to nerve growth factor (NGF), neurotrophin-3 and neurotrophin-4/5 but not brain-derived neurotrophic factor (BDNF). Known substrates for the Trk receptors are SHC1, PI 3-kinase, and PLC-gamma-1. Has a crucial role in the development and function of the nociceptive reception system as well as establishment of thermal regulation via sweating. Activates ERK1 by either SHC1- or PLC-gamma-1-dependent signaling pathway., PTM: Ligand-mediated auto-phosphorylation. Interaction with SQSTM1 is phosphotyrosine-dependent., similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family., similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor subfamily., similarity: Contains 1 protein kinase domain., similarity: Contains 2 Ig-like C2-type (immunoglobulin-like) domains., similarity: Contains 3 LRR (leucine-rich) repeats., subcellular location: Endocytosed to the endosomes upon treatment of cells with NGF., subunit: Exists in a dynamic equilibrium between monomeric (low affinity) and dimeric (high affinity) structures. Binds SH2B2. Interacts with SQSTM1 which bridges NTRK1 to NGFR. Interacts with KIDINS220 and NGFR. Can form a ternary complex with NGFR and KIDINS220 and this complex is affected by the expression levels of

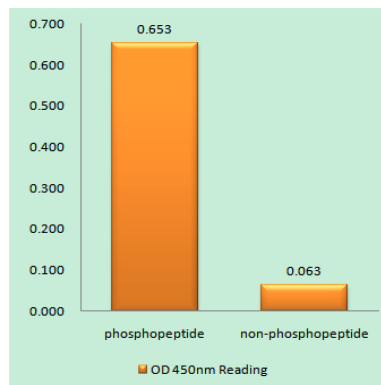
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KIDINS220. An increase in KIDINS220 expression leads to a decreased association of NGFR and NTRK1., tissue specificity: Isoform TrkA-II is primarily expressed in neuronal cells; isoform TrkA-I is found in non-neuronal tissues.,

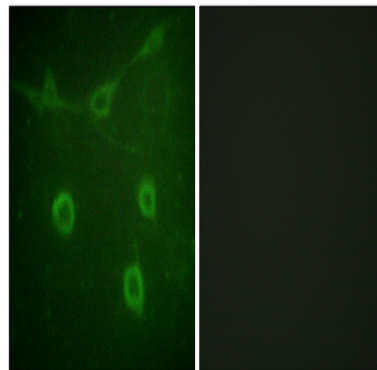
Research Area

MAPK_ERK_Growth; MAPK_G_Protein; Endocytosis; Apoptosis_Inhibition; Apoptosis_Mitochondrial; Apoptosis_Overview; Neurotrophin; Pathways in cancer; Thyroid cancer;

Image Data



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Trk A (Phospho-Tyr496) Antibody



Immunofluorescence analysis of NIH/3T3 cells, using Trk A (Phospho-Tyr496) Antibody. The picture on the right is blocked with the phospho peptide.

Note

For research use only.