

Product name:	Trk A (phospho Tyr680/Y681) Rabbit Polyclonal Antibody
Cat number:	ABN05580
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human Trk A around the phosphorylation site of Tyr680 and Tyr681. AA range:646-695
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,ELISA 1:5000-1:10000
Molecular Weight:	140-180kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

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: $\text{ATP} + \text{a [protein]-L-tyrosine} = \text{ADP} + \text{a [protein]-L-tyrosine phosphate}$, 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 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.,