

Antibody Specification

Description	neurotrophic receptor tyrosine kinase 1(NTRK1) Homo sapiens This gene encodes a member of the neu (NTRK) family. This kinase is a membrane-bound receptor that, upon neurotrophin binding, phosphoryl MAPK pathway. The presence of this kinase leads to cell differentiation and may play a role in specifying Mutations in this gene have been associated with congenital insensitivity to pain, anhidrosis, self-mutila and cancer. Alternate transcriptional splice variants of this gene have been found, but only three have [provided by RefSeq, Jul 2008],
Cell Pathway/ Category	MAPK_ERK_Growth,MAPK_G_Protein,Endocytosis,Apoptosis_Inhibition,Apoptosis_Mitochondrial,Apoptosis in cancer,Thyroid cancer,
Protein Expression	Brain,Colon,Peripheral blood,
Subcellular Localization	endosome,early endosome,late endosome,plasma membrane,integral component of plasma membrane surface,axon,dendrite,cytoplasmic vesicle,early endosome membrane,late endosome membrane,neuro
Protein Function	Both isoforms have similar biological properties,catalytic activity:ATP + a [protein]-L-tyrosine = ADP + phosphate.,caution:The sequence shown here is derived from an Ensembl automatic analysis pipeline a preliminary data.,disease:Chromosomal aberrations involving NTRK1 are a cause of thyroid papillary ca Intrachromosomal rearrangement that links the protein kinase domain of NTRK1 to the 5'-end of the TR TRK-T1. TRK-T1 is a 55 kDa protein reacting with antibodies against the C-terminus of the NTRK1 prote aberrations involving NTRK1 are a cause of thyroid papillary carcinoma (PACT) [MIM:188550]. Translocat generates the TRKT3 (TRK-T3) transcript by fusing TFG to the 3'-end of NTRK1; a rearrangement with T by fusing TPM3 to the 3'-end of NTRK1.,disease:Defects in NTRK1 are a cause of congenital insensitivity [MIM:256800]. CIPA is characterized by a congenital insensitivity to pain, anhidrosis (absence of sweatin noxious stimuli, self-mutilating behavior, and mental retardation. This rare autosomal recessive disorder sensory neuropathy with anhidrosis or hereditary sensory and autonomic neuropathy type IV or familia II.,domain:The extracellular domain mediates interaction with NGFR.,domain:The transmembrane doma KIDINS220.,function:Required for high-affinity binding to nerve growth factor (NGF), neurotrophin-3 and derived neurotrophic factor (BDNF). Known substrates for the Trk receptors are SHC1, PI 3-kinase, and in the development and function of the nociceptive reception system as well as establishment of therm Activates ERK1 by either SHC1- or PLC-gamma-1-dependent signaling pathway.,PTM:Ligand-mediated a with SQSTM1 is phosphotyrosine-dependent.,similarity:Belongs to the protein kinase superfamily. Tyr p family.,similarity:Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor s protein kinase domain.,similarity:Contains 2 Ig-like C2-type (immunoglobulin-like) domains.,similarity:C repeats.,subcellular location:Endocytosed to the endosomes upon treatment of cells with NGF.,subunit: between monomeric (low affinity) and dimeric (high affinity) structures. Binds SH2B2. Interacts with SQ NGFR. Interacts with KIDINS220 and NGFR. Can form a ternary complex with NGFR and KIDINS220 and expression levels of KIDINS220. An increase in KIDINS220 expression leads to a decreased association specificity:Isoform TrkA-II is primarily expressed in neuronal cells; isoform TrkA-I is found in non-neuron
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