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# Trk (pan) (17J17) Rabbit Monoclonal Antibody

Trk (pan) (17J17) Rabbit Monoclonal Antibody
Catalog # AP93716

## Product Information

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|---|---|
| **Application** | WB, IP |
| **Primary Accession** | P04629, Q16620, Q16288 |
| **Reactivity** | Human, Mouse, Rat |
| **Clonality** | Monoclonal |
| **Calculated MW** | 87497 |

## Additional Information

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|---|---|
| **Gene ID** | 4914 |
| **Dilution** | WB~~1:1000 IP~~N/A |
| **Storage Conditions** | -20℃ |

## Protein Information

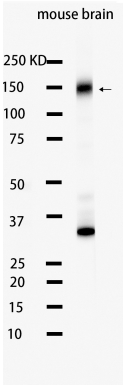
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|---|---|
| **Name** | NTRK1 |
| **Function** | Receptor tyrosine kinase involved in the development and the maturation of the central and peripheral nervous systems through regulation of proliferation, differentiation and survival of sympathetic and nervous neurons. High affinity receptor for NGF which is its primary ligand (PubMed:1281417, PubMed:15488758, PubMed:17196528, PubMed:1849459, PubMed:1850821, PubMed:22649032, PubMed:27445338, PubMed:8325889). Can also bind and be activated by NTF3/neurotrophin-3. However, NTF3 only supports axonal extension through NTRK1 but has no effect on neuron survival (By similarity). Upon dimeric NGF ligand-binding, undergoes homodimerization, autophosphorylation and activation (PubMed:1281417). Recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that regulate distinct overlapping signaling cascades driving cell survival and differentiation. Through SHC1 and FRS2 activates a GRB2-Ras-MAPK cascade that regulates cell differentiation and survival. Through PLCG1 controls NF-Kappa-B activation and the transcription of genes involved in cell survival. Through SHC1 and SH2B1 controls a Ras-PI3 kinase-AKT1 signaling cascade that is also regulating survival. In absence of ligand and activation, may promote cell death, making the survival of neurons dependent on trophic factors. |
| **Cellular Location** | Cell membrane; Single-pass type I membrane protein. Early endosome membrane {ECO:0000250\|UniProtKB:P35739}; Single-pass type I membrane protein {ECO:0000250\|UniProtKB:P35739}. Late endosome membrane {ECO:0000250\|UniProtKB:P35739}; Single-pass type I membrane protein |

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| | {ECO:0000250\|UniProtKB:P35739}. Recycling endosome membrane {ECO:0000250\|UniProtKB:P35739}; Single-pass type I membrane protein {ECO:0000250\|UniProtKB:P35739}. Note=Rapidly internalized after NGF binding (PubMed:1281417). Internalized to endosomes upon binding of NGF or NTF3 and further transported to the cell body via a retrograde axonal transport. Localized at cell membrane and early endosomes before nerve growth factor (NGF) stimulation. Recruited to late endosomes after NGF stimulation. Colocalized with RAPGEF2 at late endosomes {ECO:0000250\|UniProtKB:P35739, ECO:0000269\|PubMed:1281417} |
| **Tissue Location** | Isoform TrkA-I is found in most non-neuronal tissues. Isoform TrkA-II is primarily expressed in neuronal cells TrkA-III is specifically expressed by pluripotent neural stem and neural crest progenitors. |

## Background

This gene encodes a member of the neurotrophic tyrosine kinase receptor (NTKR) 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, cognitive disability 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]

## Images




Western blot analysis of extracts from Mouse brain tissue using AP93716 at 1:1000.

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