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TrkA Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10160

Specification

TrkA Antibody - Product Information

Application	**WB, IHC, IP**
Primary Accession	P04629
Other Accession	BAA34355
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**87497**

TrkA Antibody - Additional Information

Gene ID 4914

Application & Usage	**Western blotting (0.5-4 µg/ml) in immunoprecipitation, and Immunohistochemistry. However, the optimal conditions should be determined individually. The antibody detects ~140 kDa TrkA. It does not cross-react with TrkB or TrkC.**

Other Names
Trk-A, TRK1 , NTRK1, TRK, CIPA

Target/Specificity
TrkA

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg (0.5 mg/ml) affinity purified rabbit anti-TrkA polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol, 0.5% BSA, 0.01% thimerosal.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions
TrkA Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TrkA Antibody - Protein Information

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:1850821, PubMed:1849459, PubMed:1281417, PubMed:8325889, PubMed:15488758, PubMed:22649032, PubMed:17196528, PubMed:27445338). 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 {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.

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TrkA Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TrkA Antibody - Images

TrkA Antibody - Background

TrkA, the high affinity Nerve Growth Factor (NGF) receptor, autophosphorylates on tyrosine to activate multiple effectors. Phosphorylation at Tyr490 is required for Shc association and activation of the Ras-MAP kinase cascade. Residues Tyr674/675 lie within the catalytic domain, and phosphorylation at these sites reflects Trk kinase activity.