

**Anti-TrkA Antibody**  
**Catalog # ABO11459****Specification**

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**Anti-TrkA Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P04629</a>
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for High affinity nerve growth factor receptor(NTRK1) detection. Tested with WB in Human.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-TrkA Antibody - Additional Information**

**Gene ID** 4914

**Other Names**

High affinity nerve growth factor receptor, 2.7.10.1, Neurotrophic tyrosine kinase receptor type 1, TRK1-transforming tyrosine kinase protein, Tropomyosin-related kinase A, Tyrosine kinase receptor, Tyrosine kinase receptor A, Trk-A, gp140trk, p140-TrkA, NTRK1, MTC, TRK, TRKA

**Calculated MW**

87497 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human<br>

**Subcellular Localization**

Cell membrane ; Single-pass type I membrane protein . Early endosome membrane ; Single-pass type I membrane protein . Late endosome membrane ; Single-pass type I membrane protein . 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 (By similarity). .

**Tissue Specificity**

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. .

**Protein Name**

High affinity nerve growth factor receptor

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human TrkA(71-90aa LYIENQQHLQHLELRDLRGL).

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.**

**Sequence Similarities**

Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor subfamily.

**Anti-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:<a href="http://www.uniprot.org/citations/1281417" target="\_blank">1281417</a>, PubMed:<a href="http://www.uniprot.org/citations/15488758" target="\_blank">15488758</a>, PubMed:<a href="http://www.uniprot.org/citations/17196528" target="\_blank">17196528</a>, PubMed:<a href="http://www.uniprot.org/citations/1849459" target="\_blank">1849459</a>, PubMed:<a href="http://www.uniprot.org/citations/1850821" target="\_blank">1850821</a>, PubMed:<a href="http://www.uniprot.org/citations/22649032" target="\_blank">22649032</a>, PubMed:<a href="http://www.uniprot.org/citations/27445338" target="\_blank">27445338</a>, PubMed:<a href="http://www.uniprot.org/citations/8325889" target="\_blank">8325889</a>). 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:<a href="http://www.uniprot.org/citations/1281417" target="\_blank">1281417</a>). 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**

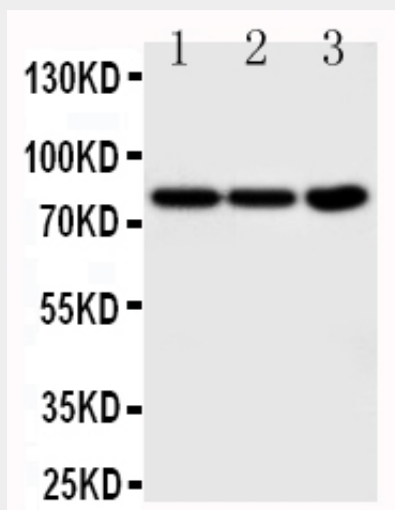
Isoform TrkA-I is found in most non-neuronal tissues. Isoform TrkA-II is primarily expressed in neuronal cells TrkA-III is specifically expressed by pluripotent neural stem and neural crest progenitors.

#### **Anti-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 Cytometry](#)
- [Cell Culture](#)

#### **Anti-TrkA Antibody - Images**



Anti-TrkA antibody, ABO11459, Western blotting  
Lane 1: COLO320 Cell Lysate  
Lane 2: HT1080 Cell Lysate  
Lane 3: U87 Cell Lysate

#### **Anti-TrkA Antibody - Background**

Neurotrophic tyrosine kinase receptor type 1, also called Trk-A, is a protein that in humans is encoded by the NTRK1 gene. The NTRK1 gene encodes the neurotrophic tyrosine kinase-1 receptor and belongs to a family of nerve growth factor receptors whose ligands include neurotrophins. This gene is mapped to 1q23.1. 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.