

Rabbit TrkA Polyclonal Antibody | anti-NTRK1 antibody

Phospho-TrkA (Tyr490) Antibody

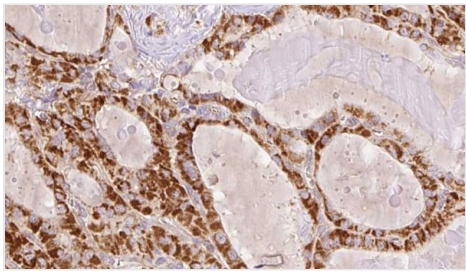
CATALOG # AAA321411	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

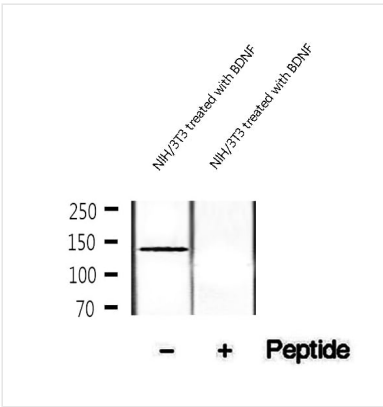
TrkA; Polyclonal Antibody; Phospho-TrkA (Tyr490) Antibody; gp140trk; High affinity nerve growth factor receptor; High affinity nerve growth factor receptor precursor; MTC; Neurotrophic tyrosine kinase receptor type 1; NTRK1; NTRK1_HUMAN; Oncogene TRK; p14-TrkA; p140 TrkA; p140-TrkA; Slow nerve growth; Trk A; TRK; Trk-A; TRK1; TRK1-transforming tyrosine kinase protein; Tropomyosin-related kinase A; Tyrosine kinase receptor A; Tyrosine kinase receptor; anti-NTRK1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-TrkA (Tyr490) antibody detects endogenous levels of TrkA.
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	760
Applicable Applications for anti-NTRK1 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human TrkA around the phosphorylation site of Tyr490.
Subcellular Location	Cell Membrane. Early Endosome Membrane. Late Endosome Membrane. 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.
Predicted Cross Reactivity	Pig, Zebrafish, Bovine, Horse, Sheep, Rabbit, Dog, Chicken
Similarity	Pig (100%), Zebrafish (86%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (82%)
Conjugation	Unconjugated
Epitope	Phospho Tyr490
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemistry)
AAA321411 at 1/100 staining Human thyroid cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of extracts of NIH/3T3 cells treated with BDNF, using Phospho-TrkA (Tyr490) Antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-NTRK1 antibody

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: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.

Subunit Structure: Exists in a dynamic equilibrium between monomeric (low affinity) and dimeric (high affinity) structures. Homodimerization is induced by binding of a NGF dimer (PubMed:1281417, PubMed:10490030, PubMed:17196528). Interacts with SQSTM1; bridges NTRK1 to NGFR (PubMed:11244088). Forms a ternary complex with NGFR and KIDINS220; this complex is affected by the expression levels of KIDINS220 and an increase in KIDINS220 expression leads to a decreased association of NGFR and NTRK1 (By similarity). Interacts with SH2D1A; regulates NTRK1 (By similarity). Interacts (phosphorylated upon activation by NGF) with SHC1; mediates SHC1 phosphorylation and activation (PubMed:8155326, PubMed:15488758). Interacts (phosphorylated upon activation by NGF) with PLCG1; mediates PLCG1 phosphorylation and activation (PubMed:7510697, PubMed:15488758). Interacts (phosphorylated) with SH2B1 and SH2B2 (By similarity). Interacts with GRB2 (PubMed:15488758). Interacts with PIK3R1 (PubMed:15488758). Interacts with FRS2 (PubMed:15488758). Interacts with SORT1; may regulate NTRK1 anterograde axonal transport (PubMed:21102451). Interacts with RAB7A (By similarity). Found in a complex, at least composed of KIDINS220, MAGI2, NTRK1 and RAPGEF2; the complex is mainly formed at late endosomes in a nerve growth factor (NGF)-dependent manner (By similarity). Interacts with RAPGEF2; the interaction is strengthened after NGF stimulation (By similarity). Interacts with PTPRS (By similarity). Interacts with USP36; USP36 does not deubiquitinate NTRK1 (PubMed:27445338).

Post-translational Modifications: Ligand-mediated autophosphorylation (PubMed:2927393, PubMed:1281417, PubMed:15488758, PubMed:7510697, PubMed:8155326, PubMed:8325889, PubMed:27676246, PubMed:28177573). Interaction with SQSTM1 is phosphotyrosine-dependent. Autophosphorylation at Tyr-496 mediates interaction and phosphorylation of SHC1 (PubMed:15488758, PubMed:7510697, PubMed:8155326, PubMed:8325889). N-glycosylated (PubMed:2927393). Isoform TrkA-I and isoform TrkA-II are N-glycosylated. Ubiquitinated (PubMed:27445338). Undergoes polyubiquitination upon activation; regulated by NGFR (PubMed:27445338). Ubiquitination by NEDD4L leads to degradation (PubMed:27445338). Ubiquitination regulates the internalization of the receptor (By similarity).

Similarity: The transmembrane domain mediates interaction with KIDINS220. The extracellular domain mediates interaction with NGFR. Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	56118210
NCBI GeneID	4914
NCBI Accession #	NP_001007793.1
NCBI GenBank Nucleotide #	NM_001007792.1
UniProt Accession #	P04629; P08119; Q15655; Q15656; Q5D056; Q5VZS2; Q7Z5C3; Q9UIU7; B2R6T5; B7ZM34
Molecular Weight	Observed: 140 kDa Predicted: 88 kDa
NCBI Official Full Name	high affinity nerve growth factor receptor isoform 3
NCBI Official Synonym Full Names	neurotrophic receptor tyrosine kinase 1
NCBI Official Symbol	NTRK1
NCBI Official Synonym Symbols	MTC; TRK; TRK1; TRKA; Trk-A; p140-TrkA
NCBI Protein Information	high affinity nerve growth factor receptor
UniProt Protein Name	High affinity nerve growth factor receptor
UniProt Gene Name	NTRK1
UniProt Synonym Gene Names	MTC; TRK1 PublicationManual assertion based on opinion iniRef.1; Trk-A

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/trka-antibody-immunohistochemistry-western-blot-elisa/321411>