10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-TrkA(Y791) Antibody Blocking peptide

Synthetic peptide
Catalog # BP3282a

Specification

Phospho-TrkA(Y791) Antibody Blocking peptide - Product Information

Primary Accession P04629

Phospho-TrkA(Y791) Antibody Blocking peptide - Additional Information

Gene ID 4914

Other Names
High affinity nerve growth factor receptor, 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

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3282a was selected from the region of human Phospho-TrkA-Y791. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-TrkA(Y791) Antibody Blocking peptide - 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.

Phospho-TrkA(Y791) Antibody Blocking peptide - Protocols

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

- Blocking Peptides

Phospho-TrkA(Y791) Antibody Blocking peptide - Images

Phospho-TrkA(Y791) Antibody Blocking peptide - Background

TrkA is 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, mental retardation and cancer.

Phospho-TrkA(Y791) Antibody Blocking peptide - References

Tokusashi, Y., et al., Int. J. Cancer 114(1):39-45 (2005).Schulte, J.H., et al., Oncogene 24(1):165-177 (2005).Frattini, M., et al., Oncogene 23(44):7436-7440 (2004).Tacconelli, A., et al., Cancer Cell 6(4):347-360 (2004).Florenes, V.A., et al., Am. J. Clin. Pathol. 122(3):412-420 (2004).