Datasheet for ABIN7043391

anti-NTRK3 antibody (Extracellular)

3 Images

Go to Product page

Overview

Quantity:	50 µL
Target:	NTRK3
Binding Specificity:	AA 393-405, Extracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This NTRK3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunochromatography (IC), Live Cell Imaging (LCI)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to TrkC
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)GHFLKEPFPESTD, corresponding to amino acid residues 393-405 of rat TrkC
Isotype:	IgG
Specificity:	Extracellular, N-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Mouse,human - identical
Characteristics:	Anti-TrkC (extracellular) Antibody (ABIN7043391, ABIN7044775 and ABIN7044776) is a highly

Product Details

	specific antibody directed against an epitope of the rat protein. The antibody can be used in western blot, immunohistochemistry, live cell imaging, and immunocytochemistry applications. It has been designed to recognize TrkC from rat, mouse, and human samples.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	NTRK3
Alternative Name:	NTRK3 (NTRK3 Products)
Background:	Neurotrophic tyrosine kinase receptor 3, NT-3 growth factor receptor, GP145-TrkC, NTRK3,BDNF and NT-4 belong to the neurotrophin family which also includes NGF and NT-3. These neurotrophins bind two groups of receptors. The p75NTR receptor is common to all four neurotrophins and is a member of the tumor necrosis factor receptor family. The tropomyosin-related kinase (Trk) receptors are receptor tyrosine kinases (RTKs) and three receptors form this family: TrkA, TrkB, and TrkC1.As mentioned above, the p75NTR receptor binds to all neurotrophins with similar affinities while the Trk receptors are the ones to display the selectivity for the neurotrophins. TrkA is activated by NGF binding, TrkB by that of BDNF and NT-4, while TrkC is stimulated by the binding of NT-3 1.All three Trk receptors are highly expressed in the mammalian brain in very distinct regions and are also expressed in the peripheral nervous system2-4. Cholinergic neurons in the basal forebrain exclusively express TrkA, while TrkB and TrkC are highly expressed in the hippocampus. Motor and sensory neurons in the peripheral nervous system express Trk receptors. Interestingly, Trk receptors are not essential for development, but knockout mice die shortly after birth. Indeed, TrkB-deficient mice demonstrate a significant decrease in motor neurons and synaptogenesis1.Trk receptors have many motifs in the extracellular region, including cell-adhesion domains, three tandem leucine rich motifs flanked by two clusters of cysteines. In the membrane proximal region of the receptor there are also two immunoglobulin-like domains5. The binding of neurotrophins to Trk receptors promotes receptor dimerization resulting in kinase activation. Activated Trk receptors then phosphorylate a cascade of signaling molecules including the Ras/ERK, PI3K/Akt pathways and PLC-γ1. Activated Trk receptors also create internal docking sites for other signaling adaptor proteins to bind to5. Splice variants of TrkA, TrkB and TrkC have been observed. These splice isoforms are mainly affected in the tyrosine kinase domain of the receptor lying in the cytoplasm. Endocytosis is an important signaling trait of Trk receptors.Following neurotrophin binding to the Trk receptor, the receptor complex is then internalized via endocytosis in order to terminate signaling. However, in the axonal

Target Details

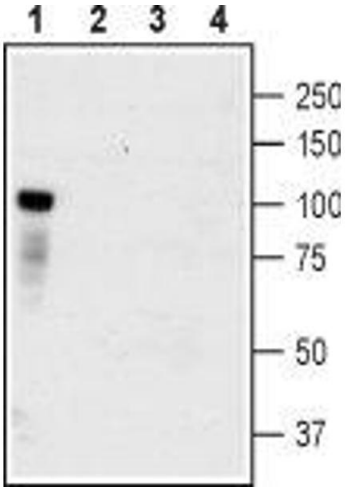
	compartment of neurons the internalization process of the neurotrophin complexed to the receptor is part of the signaling process and is important for activating transcription processes in the nucleus6,7. Alternative names: TrkC, Neurotrophic tyrosine kinase receptor 3, NT-3 growth factor receptor, GP145-TrkC, NTRK3
Gene ID:	29613
NCBI Accession:	NM_001007156
UniProt:	Q03351
Pathways:	RTK Signaling, Neurotrophin Signaling Pathway, Regulation of Cell Size

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:100 Application Dilutions Western blot wb: 1:400
Comment:	Negative Control: (ABIN7236140) Blocking Peptide: (ABIN7236140)
Restrictions:	For Research Use only

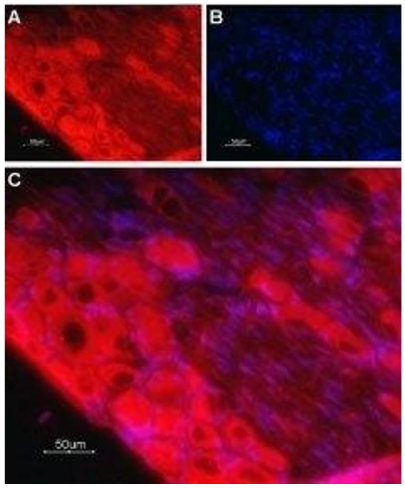
Handling

Format:	Lyophilized
Reconstitution:	Recosntitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).



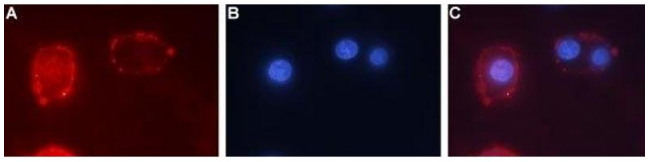
Western Blotting

Image 1. Western blot analysis of HEK-TrkC transfected cells (lanes 1 and 3) and HEK untransfected cells (lanes 2 and 4) lysates: - 1,2. Anti-TrkC (extracellular) Antibody (ABIN7043391, ABIN7044775 and ABIN7044776), (1:400).3,4. Anti-TrkC (extracellular) Antibody, preincubated with TrkC (extracellular) Blocking Peptide (#BLP-NT020).



Immunohistochemistry

Image 2. Expression of TrkC in rat dorsal root ganglia - Immunohistochemical staining of rat dorsal root ganglia (DRG) frozen sections using Anti-TrkC (extracellular) Antibody (ABIN7043391, ABIN7044775 and ABIN7044776), (1:100). A. TrkC labeling (red) appears in cell bodies. Note that the nerve fibers are not stained. B. Nuclear staining (blue) was visualized using Hoechst 33342. C. Merge of A and B.



Immunocytochemistry

Image 3. Expression of TrkC in rat PC12 cells - Cell surface detection of TrkC in live intact rat pheochromocytoma PC12 cells. A. Extracellular staining of cells using Anti-TrkC (extracellular) Antibody (ABIN7043391, ABIN7044775 and ABIN7044776), (1:50) followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Nuclear staining using the cell permeable dye Hoechst 33342 (blue). C. Merge image of A and B.