Datasheet for ABIN967746

anti-TRKB antibody (AA 156-322)

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Overview

Quantity:	150 µg
Target:	TRKB (NTRK2)
Binding Specificity:	AA 156-322
Reactivity:	Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This TRKB antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), BioImaging (BI), Fluorescence Microscopy (FM)

Product Details

Immunogen:	Human TrkB aa. 156-322
Clone:	47-TrkB
Isotype:	IgG1
Cross-Reactivity:	Rat (Rattus), Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	TRKB (NTRK2)
Alternative Name:	TrkB (NTRK2 Products)
Background:	The full-length TrkB gene has been reported to encode for a 145 kDa glycosylated transmembrane tyrosine kinase and neurotrophin receptor. The same gene also has been reported to encode for a 95 kDa glycoprotein that is identical to gp145 [TrkB] at the extracellular domain and transmembrane portion but lacks the intracellular portion. TrkB has been observable in a range of 116-145 kD and 70-95 kD due to various TrkB maturation states, subcellular localizations, and glycosylation states. TrkB belongs to a family of tyrosine kinases that include the TrkA proto-oncogene and TrkC. All have an extracellular ligand-binding domain, a transmembrane region, and intracellular kinase and autophosphorylation domains. TrkB binds the neurotrophins NT3 and NT4/5, as well as brain-derived neurotrophic factor (BDNF), a peptide that helps motor neuron survival and repair. The TrkB tyrosine kinase is activated upon binding to BDNF resulting in autophosphorylation of residues Y670, Y674 and Y675 and the subsequent association of several intracellular proteins like PLCgamma, Shc, and PI3-Kinase. TrkB is widely expressed in cells of neuroepithelium and neural crest origin. Some of these include motor neurons, dopamine-producing neurons, and neurons which release gamma-aminobutyric acid in the substantia nigra, neocortex, and hippocampus. The two TrkB gene products are differentially expressed in regions of the adult brain. Synonyms: Neurotrophic Tyrosine Kinase Receptor Type 2, NTRK2
Molecular Weight:	116-145 & 70-95 kDa
Pathways:	RTK Signaling, Neurotrophin Signaling Pathway, cAMP Metabolic Process, Skeletal Muscle Fiber Development, Feeding Behaviour, Dicarboxylic Acid Transport

Application Details

Comment:	Related Products: ABIN968545, ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid

Handling

Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:

Gertych, Oh, Wawrowsky, Weisenberger, Tajbakhsh: "3-D DNA methylation phenotypes correlate with cytotoxicity levels in prostate and liver cancer cell models." in: **BMC pharmacology & toxicology**, Vol. 14, pp. 11, (2013) (PubMed).

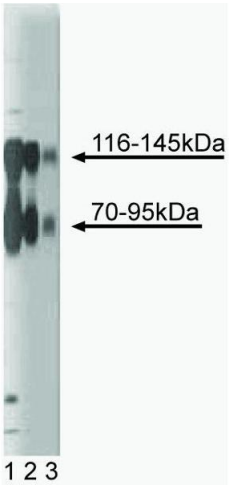
Tajbakhsh: "Covisualization of methylcytosine, global DNA, and protein biomarkers for In Situ 3D DNA methylation phenotyping of stem cells." in: **Methods in molecular biology (Clifton, N.J.)**, Vol. 1052, pp. 77-88, (2013) (PubMed).

Fukuda, Ichiyanagi, Yamada, Go, Udono, Wada, Maeda, Soejima, Saitou, Ito, Sasaki: "Regional DNA methylation differences between humans and chimpanzees are associated with genetic changes, transcriptional divergence and disease genes." in: **Journal of human genetics**, Vol. 58, Issue 7, pp. 446-54, (2013) (PubMed).

Kurita, Arai, Nakamoto, Kato, Niwa: "Determination of DNA methylation using electrochemiluminescence with surface accumulable coreactant." in: **Analytical chemistry**, Vol. 84, Issue 4, pp. 1799-803, (2012) (PubMed).

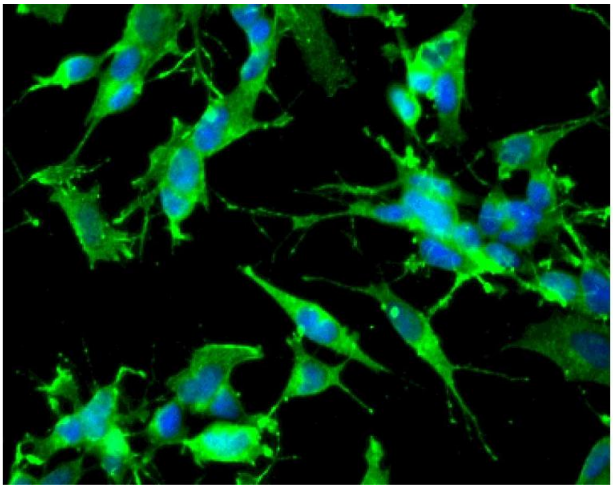
Kurita, Niwa: "DNA methylation analysis triggered by bulge specific immuno-recognition." in: **Analytical chemistry**, Vol. 84, Issue 17, pp. 7533-8, (2012) (PubMed).

There are more publications referencing this product on: Product page



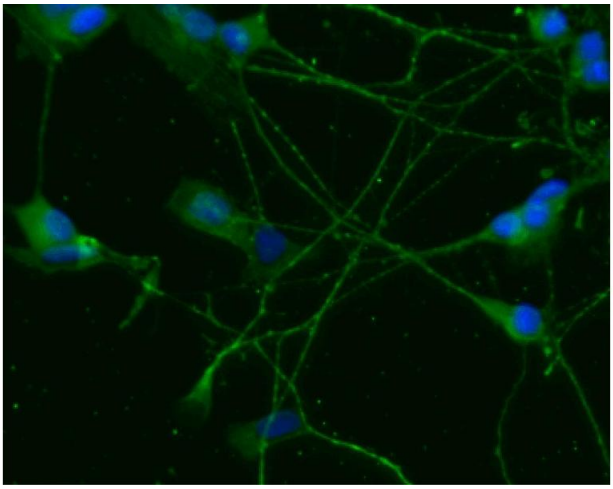
Western Blotting

Image 1. Western blot analysis of TrkB on a rat cerebrum lysate (left). Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-TrkB antibody.



Immunofluorescence

Image 2. Immunofluorescent staining of undifferentiated (left) and differentiated (right) SH-SY5Y cells (ATCC CRL-2266, Human neuroblastoma). Undifferentiated cells were seeded in a collagen coated 384 well imaging plate at ~ 8,000 cells per well. After overnight incubation, cells were stained using the methanol fix/perm protocol (see Recommended Assay Procedure, Bioimaging protocol link) and the mouse anti-Trk B antibody. Differentiated cells were seeded in a 96 well, collagen coated imaging plate at ~ 5,000 cells per well. Cells were incubated with 50 mM ATRA (Sigma-Aldrich, R2625) for 5 days, followed by 50 ng/ml BDNF (Sigma-Aldrich, B3795) for 5 days. Differentiated cells were fixed and stained using the methanol fix/perm protocol, and the mouse anti-Trk B antibody. The second step reagent in both cases was Alexa Fluor® 488 goat anti mouse Ig (Invitrogen) (pseudo colored green) and counter-stained with Hoechst 33342 (pseudo colored blue). The images were taken on a BD Pathway™ 855 or 435 imager, using a 20x objective and merged using BD AttoVision™ software. This antibody also stained undifferentiated SK-N-SH cells (ATCC HTB-11, Human neuroblastoma) and C6 cells (ATCC CCL-107, Rat glial cells) using both the Triton X100 and methanol fix/perm protocols (see Recommended Assay Procedure, Bioimaging protocol link).



Immunofluorescence

Image 3.

Please check the product details page for more images. Overall 4 images are available for ABIN967746.