Anti-TrkB antibody ab18987

Overview

Product name: Anti-TrkB antibody
Description: Rabbit polyclonal to TrkB
Host species: Rabbit
Specificity: ab18987 recognizes trkB from samples of human and rat origins. Trk protein exists as variably glycosylated entities with the major forms having molecular weights of 140 kDa, 110 kDa, and the unglycosylated form of 80 kDa.

Tested applications: Suitable for: ICC/IF, IP, WB, IHC-P
Species reactivity: Reacts with: Mouse, Rat, Chicken, Human
Immunogen: Synthetic peptide corresponding to Human TrkB. Surrounding amino acid 810 of human TrkB. (Peptide available as ab52216)
Positive control: HL-60 cell lysate

Properties

Form: Liquid
Storage buffer: Preservative: 0.01% Thimerosal (merthiolate)
Constituents: 99% PBS, 30% Glycerol, 0.5% BSA
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab18987 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 2 - 10 µg/ml.</td>
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<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>WB</td>
<td></td>
<td>Use a concentration of 0.5 - 4 µg/ml. Detects a band of approximately 92 kDa (predicted molecular weight: 92 kDa).</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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**Function**

Receptor for brain-derived neurotrophic factor (BDNF), neurotrophin-3 and neurotrophin-4/5 but not nerve growth factor (NGF). Involved in the development and/or maintenance of the nervous system. This is a tyrosine-protein kinase receptor. Known substrates for the TRK receptors are SHC1, PI-3 kinase, and PLC-gamma-1.

**Tissue specificity**

Isoform TrkB is widely expressed, mainly in the nervous tissue. In the CNS, expression is observed in the cerebral cortex, hippocampus, thalamus, choroid plexus, granular layer of the cerebellum, brain stem, and spinal cord. In the peripheral nervous system, it is expressed in many cranial ganglia, the ophthalmic nerve, the vestibular system, multiple facial structures, the submaxillary glands, and dorsal root ganglia. Isoform TrkB-T1 is expressed in multiple tissues, mainly in brain, pancreas, kidney and heart. Isoform TrkB-T-Shc is predominantly expressed in brain.

**Sequence similarities**

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

Contains 2 Ig-like C2-type (immunoglobulin-like) domains.

Contains 2 LRR (leucine-rich) repeats.

Contains 1 LRRCT domain.

Contains 1 LRRNT domain.

Contains 1 protein kinase domain.

**Post-translational modifications**

Ligand-mediated auto-phosphorylation.

**Cellular localization**

Membrane.

**Target**

**Images**

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Western blot - Anti-TrkB antibody (ab18987)

Western blot of Anti-TrkB antibody (ab18987) + HL-60 Cell Lysate.

- **Predicted band size:** 92 kDa
- **Observed band size:** >90 kDa

*why is the actual band size different from the predicted?*

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TrkB antibody (ab18987)

*ab18987 staining TrkB in rat spinal cord tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections).* Tissue was fixed with formaldehyde and blocked with 2% BSA for 10 minutes at 21°C; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/250 in blocking buffer) for 2 hours at 21°C. A Biotin-conjugated Goat anti-rabbit IgG polyclonal (1/300) was used as the secondary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TrkB antibody (ab18987)

*Image courtesy of an Abreview by Carl Hobbs.*

*ab18987 staining TrkB in human skin tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).*

Tissue was fixed in paraformaldehyde and a heat mediated antigen retrieval step was performed using citrate buffer pH 6.0. Samples were then permeabilized using 0.1% saponin/PBS, blocked with 4% serum for 30 minutes at 25°C and then incubated with ab18987 at 5µg/ml for 14 hours at 4°C. The secondary used was a biotin conjugated goat anti-rabbit polyclonal used at 15µg/ml.
Immunocytochemistry/ Immunofluorescence - Anti-TrkB antibody (ab18987)

This image is courtesy of an anonymous Abreview.

ab18987 staining TrkB in rat PC12 cells by Immunocytochemistry/ Immunofluorescence.

Cells were fixed with methanol, permeabilized with 0.1% Saponin / PBS and blocked with 4% serum for 30 minutes at 25°C. Samples were incubated with primary antibody (5 µg/ml in blocking buffer) for 14 hours at 4°C. An AlexaFluor®488-conjugated goat anti-rabbit polyclonal IgG (ab150077) (1/100) was used as the secondary antibody.

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