

Trk B (N-20): sc-20542

BACKGROUND

The Trk proto-oncogene encodes a tyrosine protein kinase, Trk A, also designated Trk gp140, that serves as a receptor for certain neurotrophic factors including nerve growth factor (NGF) and neurotrophin-3 (NT-3). Trk B is a tyrosine kinase gene highly related to Trk A. Trk B expression is confined to tissues within the central and peripheral nervous systems. The brain-derived neurotrophic factor (BDNF) and NT-3, but not NGF, can induce rapid phosphorylation on tyrosine of Trk B gp145, one of the receptors encoded by Trk B, although BDNF elicits a response at least two orders of magnitude greater than NT-3. Thus it appears that Trk B gp145 may represent a neurotrophic receptor for BDNF and NT-3. The third member of the Trk family of tyrosine kinases, Trk C, encodes a protein designated Trk C gp145 that is preferentially expressed in brain tissue, is equally related to Trk A and Trk B, and is a functional receptor for NT-3.

CHROMOSOMAL LOCATION

Genetic locus: NTRK2 (human) mapping to 9q21.33; Ntrk2 (mouse) mapping to 13 B1.

SOURCE

Trk B (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Trk B of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20542 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Trk B (N-20) is recommended for detection of Trk B splice variants L1 and L10 of mouse origin, Trk B gp95 and Trk B gp145 of rat origin and Trk B, Trk B-T1 and Trk B T-Shc of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Trk B (N-20) is also recommended for detection of Trk B, Trk B-T1 and Trk B T-Shc in additional species, including canine.

Suitable for use as control antibody for Trk B siRNA (h): sc-36728, Trk B siRNA (m): sc-36729, Trk B shRNA Plasmid (h): sc-36728-SH, Trk B shRNA Plasmid (m): sc-36729-SH, Trk B shRNA (h) Lentiviral Particles: sc-36728-V and Trk B shRNA (m) Lentiviral Particles: sc-36729-V.

Molecular Weight of Trk B splice variants: 95-145 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or rat cerebellum extract: sc-2398.

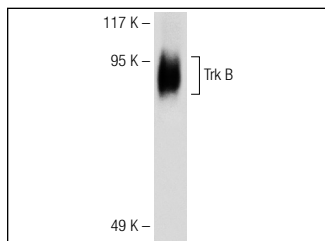
RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Trk B (N-20): sc-20542. Western blot analysis of human recombinant Trk B.

SELECT PRODUCT CITATIONS

- Harel, S., et al. 2006. Tyrosine kinase B receptor and its activated neurotrophins in ovaries from human fetuses and adults. *Mol. Hum. Reprod.* 12: 357-365.
- Dolotov, O.V., et al. 2006. Semax, an analog of ACTH(4-10) with cognitive effects, regulates BDNF and trkB expression in the rat hippocampus. *Brain Res.* 1117: 54-60.
- Martens, L.K., et al. 2007. Hypoxia-inducible factor-1 (HIF-1) is a transcriptional activator of the Trk B neurotrophin receptor gene. *J. Biol. Chem.* 282: 14379-14388.
- Asai, N., et al. 2007. Temporal and spatial differences in expression of TrkB isoforms in rat retina during constant light exposure. *Exp. Eye Res.* 85: 346-355.
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- Snaypan, M., et al. 2009. Vasculature guides migrating neuronal precursors in the adult mammalian forebrain via brain-derived neurotrophic factor signaling. *J. Neurosci.* 29: 4172-4188.
- Saito, T., et al. 2009. TrkB-T1 receptors on Muller cells play critical role in brain-derived neurotrophic factor-mediated photoreceptor protection against phototoxicity. *Curr. Eye Res.* 34: 580-588.
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