

Trk C (H-300): sc-14025

BACKGROUND

The Trk proto-oncogene encodes a tyrosine protein kinase, Trk gp140, also designated Trk A, 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, is mainly expressed in nervous tissue, and is a functional receptor for neurotrophin-3 (NT-3). Four forms of Trk C are produced by alternative splicing. Isoform A is full length Trk C, isoform B differs from A between amino acids 529 to 612 and is missing amino acids 613 to 839. Isoform C of Trk C is missing amino acids 712 to 725 and isoform D is missing amino acids 402 to 410.

CHROMOSOMAL LOCATION

Genetic locus: NTRK3 (human) mapping to 15q25.3; Ntrk3 (mouse) mapping to 7 D3.

SOURCE

Trk C (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping near the N-terminus of Trk C 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.

APPLICATIONS

Trk C (H-300) is recommended for detection of Trk C isoforms A, B, C, and D of mouse, rat and 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 C (H-300) is also recommended for detection of Trk C isoforms A, B, C, and D in additional species, including bovine and porcine.

Suitable for use as control antibody for Trk C siRNA (h): sc-36730, Trk C siRNA (m): sc-36731, Trk C shRNA Plasmid (h): sc-36730-SH, Trk C shRNA Plasmid (m): sc-36731-SH, Trk C shRNA (h) Lentiviral Particles: sc-36730-V and Trk C shRNA (m) Lentiviral Particles: sc-36731-V.

Molecular Weight of Trk C splice variants: 50-145 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187.

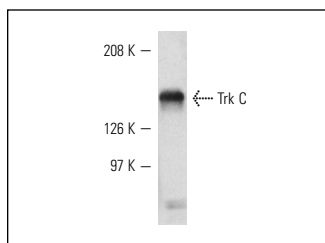
STORAGE

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

RESEARCH USE

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

DATA



Trk C (H-300): sc-14025. Western blot analysis of Trk C expression in EOC 20 whole cell lysate.

SELECT PRODUCT CITATIONS

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- Dierssen, M., et al. 2006. Transgenic mice overexpressing the full-length neurotrophin receptor Trk C exhibit increased catecholaminergic neuron density in specific brain areas and increased anxiety-like behavior and panic reaction. *Neurobiol. Dis.* 24: 403-418.
- Nakaso, K., et al. 2006. Novel cytoprotective mechanism of anti-parkinsonian drug deprenyl: PI3K and Nrf2-derived induction of antioxidative proteins. *Biochem. Biophys. Res. Commun.* 339: 915-922.
- Unsain, N., et al. 2008. Status epilepticus induces a Trk B to p75 neurotrophin receptor switch and increases brain-derived neurotrophic factor interaction with p75 neurotrophin receptor: an initial event in neuronal injury induction. *Neuroscience* 154: 978-993.
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- Leiper, L.J., et al. 2009. Control of patterns of corneal innervation by Pax6. *Invest. Ophthalmol. Vis. Sci.* 50: 1122-1128.
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- Oron, G., et al. 2011. Expression of neurotrophin 3 and its tropomyosin-related kinase receptor C in human preantral follicles. *Fertil. Steril.* 95: 2056-2062.


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