

Trk (C-15): sc-139

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 neurotrophin-3 (NT-3).

SOURCE

Trk (C-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Trk of porcine origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Trk (C-15) is available conjugated to agarose (sc-139 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-139 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Trk (C-15) is recommended for detection of Trk A, Trk B and Trk C 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), immunohistochemistry (including paraffin-embedded sections) (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-15) is also recommended for detection of Trk A, Trk B and Trk C in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Trk siRNA (h): sc-29511, Trk siRNA (m): sc-29512, Trk shRNA Plasmid (h): sc-29511-SH, Trk shRNA Plasmid (m): sc-29512-SH, Trk shRNA (h) Lentiviral Particles: sc-29511-V and Trk shRNA (m) Lentiviral Particles: sc-29512-V.

Molecular Weight of Trk splice variants: 53-140 kDa.

Positive Controls: rat brain extract: sc-2392, H4 cell lysate: sc-2408 or SK-N-SH cell lysate: sc-2410.

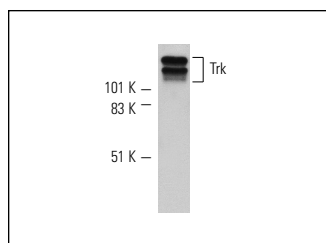
STORAGE

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

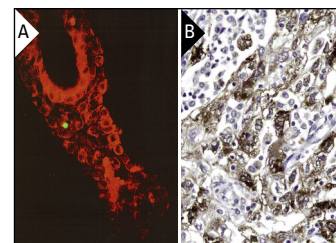
RESEARCH USE

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

DATA



Trk (C-15): sc-139. Western blot analysis of Trk expression in rat brain extract.



Trk (C-15): sc-139. Cryostat sections of mouse skin showing hair follicle staining. Note red immunofluorescence staining of Trk C and green TUNEL staining marking apoptotic cells. Kindly provided by Hair Research Group, Humboldt University, Berlin (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovarian cancer tissue showing membrane and cytoplasmic staining of tumor cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- Wai, D.H., et al. 2000. The ETV6-NTRK3 gene fusion encodes a chimeric protein tyrosine kinase that transforms NIH/3T3 cells. *Oncogene* 19: 906-915.
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- Robinson, K. 2005. Neurotrophin-dependent tyrosine phosphorylation of Ras guanine-releasing factor 1 and associated neurite outgrowth is dependent on the HIKE domain of Trk A. *J. Biol. Chem.* 280: 225-235.
- Zhang, X and Huang, J. 2005. NGF rapidly increases membrane expression of TRPV1 heat-gated ion channels. *EMBO J.* 24: 4211-4223.
- Tauszig-Delamasure, S., et al. 2007. The Trk C receptor induces apoptosis when the dependence receptor notion meets the neurotrophin paradigm. *Proc. Natl. Acad. Sci. USA* 104: 13361-13366.
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