

Trk (C-14): sc-11



The Power to Question

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-14) is available as either rabbit (sc-11) or goat (sc-11-G) polyclonal affinity purified antibody raised against a peptide mapping within the C-terminus of Trk of human origin.

PRODUCT

Each vial contains either 100 µg (sc-11) or 200 µg (sc-11-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Trk (C-14) is available conjugated to agarose (sc-11 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-11 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Trk (C-14) 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-14) is also recommended for detection of Trk A, Trk B and Trk C in additional species, including equine, bovine and porcine.

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: PC-12 cell lysate: sc-2250, H4 cell lysate: sc-2408 or SK-N-SH cell lysate: sc-2410.

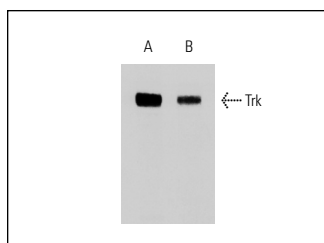
STORAGE

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

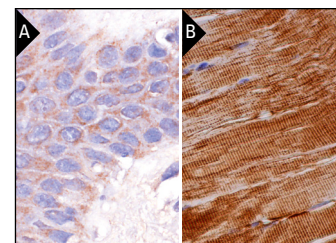
RESEARCH USE

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

DATA



Trk (C-14): sc-11. Western blot analysis of Trk expression in retinoic acid induced EC P19 cells at IgG concentrations of 5.0 µg/ml (A) and 1.0 µg/ml (B).



Trk (C-14): sc-11. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human skin tissue showing membrane staining (A). Trk (C-14)-G: sc-11-G. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (B).

SELECT PRODUCT CITATIONS

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- Cassens, C., et al. 2010. Binding of the receptor tyrosine kinase TrkB to the neural cell adhesion molecule (NCAM) regulates phosphorylation of NCAM and NCAM-dependent neurite outgrowth. *J. Biol. Chem.* 285: 28959-28967.
- Bouzas-Rodriguez, J., et al. 2010. Neurotrophin-3 production promotes human neuroblastoma cell survival by inhibiting TrkC-induced apoptosis. *J. Clin. Invest.* 120: 850-858.
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- Yu, T., et al. 2011. Regulation of trafficking of activated TrkA is critical for NGF-mediated functions. *Traffic* 12: 521-534.
- Autio, H., et al. 2011. Acetylcholinesterase inhibitors rapidly activate Trk neurotrophin receptors in the mouse hippocampus. *Neuropharmacology* 61: 1291-1296.

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Try **Trk (B-3): sc-7268** or **Trk (MCTrks): sc-414**, our highly recommended monoclonal alternatives to Trk (C-14). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Trk (B-3): sc-7268**.