

## Trk A (H-190): sc-14024

### 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: NTRK1 (human) mapping to 1q23.1; Ntrk1 (mouse) mapping to 3 F1.

### SOURCE

Trk A (H-190) is a rabbit polyclonal antibody raised against amino acids 101-290 mapping near the N-terminus of Trk A gp 140 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 A (H-190) is recommended for detection of Trk A 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 A (H-190) is also recommended for detection of Trk A in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Trk A siRNA (h): sc-36726, Trk A siRNA (m): sc-36727, Trk A shRNA Plasmid (h): sc-36726-SH, Trk A shRNA Plasmid (m): sc-36727-SH, Trk A shRNA (h) Lentiviral Particles: sc-36726-V and Trk A shRNA (m) Lentiviral Particles: sc-36727-V.

Molecular Weight of Trk A: 80 kDa.

Molecular Weight of glycosylated Trk A: 140 kDa.

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

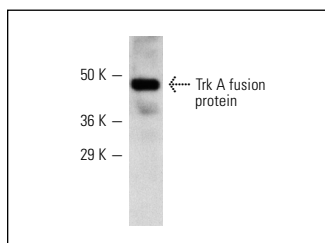
### STORAGE

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 A (H-190): sc-14024. Western blot analysis of human recombinant Trk A fusion protein.

### SELECT PRODUCT CITATIONS

- van den Akker, E., et al. 2004. Tyrosine kinase receptor RON functions downstream of the erythropoietin receptor to induce expansion of erythroid progenitors. *Blood* 103: 4457-4465.
- Murray, S.S., et al. 2004. A novel p75 neurotrophin receptor-related protein, NRH2, regulates nerve growth factor binding to the Trk A receptor. *J. Neurosci.* 24: 2742-2749.
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- Opazo, M.C., et al. 2008. Maternal hypothyroxinemia impairs spatial learning and synaptic nature and function in the offspring. *Endocrinology* 149: 5097-5106.
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- Kitazawa, A., et al. 2010. Accumulation of neurons differentiated from mouse embryonic stem cells in particular areas of culture plate surface. *J. Biosci. Bioeng.* 110: 238-241.
- Takamura, A., et al. 2011. Lysosomal accumulation of Trk protein in brain of GM-gangliosidosis mouse and its restoration by chemical chaperone. *J. Neurochem.* 118: 399-406.

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Try **Trk A (Y32Ex): sc-80398**, our highly recommended monoclonal alternative to Trk A (H-190).