

Trk C (798): sc-117

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, is mainly expressed in nervous tissue, and is a functional receptor for 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. Trk C, isoform 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 (798) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of Trk C of porcine 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-117 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Trk C (798) is recommended for detection of Trk C gp145 isoforms A, 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); non cross-reactive with isoform B.

Trk C (798) is also recommended for detection of Trk C gp145 isoforms A, C and D in additional species, including equine, canine, bovine, porcine and avian.

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.

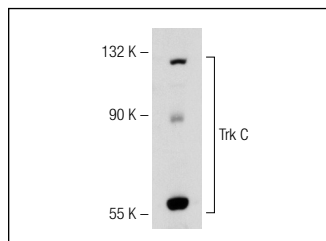
Molecular Weight of Trk C splice variants: 50-145 kDa.

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.

DATA



Trk C (798): sc-117. Western blot analysis of Trk C expression in EOC 20 whole cell lysate.

SELECT PRODUCT CITATIONS

- Chang, S., et al. 1999. Long-range signaling within growing neurites mediated by neurotrophin-3. *Proc. Natl. Acad. Sci. USA* 96: 4095-4100.
- Labouyrie, E., et al. 1999. Expression of neurotrophins and their receptors in human bone marrow. *Adv. Cancer Res.* 154: 405-415.
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- Chalazonitis, A., et al. 2008. Bone morphogenetic protein regulation of enteric neuronal phenotypic diversity: relationship to timing of cell cycle exit. *J. Comp. Neurol.* 509: 474-492.
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- Dagnell, C., et al. 2010. Neurotrophins and neurotrophin receptors in pulmonary sarcoidosis-granulomas as a source of expression. *Respir. Res.* 11: 156.
- Jin, W., et al. 2010. TrkC plays an essential role in breast tumor growth and metastasis. *Carcinogenesis* 31: 1939-1947.
- D'Angelo, L., et al. 2011. Neurotrophin Trk receptors in the brain of a teleost fish, *Nothobranchius furzeri*. *Microsc. Res. Tech.* 75: 81-88.

RESEARCH USE

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

MONOS
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Try **Trk C (WW6): sc-80403**, our highly recommended monoclonal alternative to Trk C (798).