Trk (B-3): sc-7268

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). TrkB 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 TrkB gp145, one of the receptors encoded by TrkB, although BDNF elicits a response at least two orders of magnitude greater than NT-3. Thus it appears that TrkB 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 (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 777-796 at the C-terminus of Trk A gp140 of human origin.

PRODUCT

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TrkB-3 is available conjugated to agarose (sc-7268 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7268 HRP), 200 µg/ml, for WB, ICIP and ELISA; to either phycoerythrin (sc-7268 PE), fluorescein (sc-7268 FITC), Alexa Fluor® 488 (sc-7268 AF488), Alexa Fluor® 546 (sc-7268 AF546), Alexa Fluor® 594 (sc-7268 AF594) or Alexa Fluor® 647 (sc-7268 AF647), 200 µg/ml, for WB (RGB), IF, IHCIP and FCM; and to either Alexa Fluor® 680 (sc-7268 AF680) or Alexa Fluor® 790 (sc-7268 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-7268 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Trk (B-3) is recommended for detection of Trk A, TrkB 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 1:30-1:300).

Trk (B-3) is also recommended for detection of Trk A, TrkB and Trk C in additional species, including 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 siRNA (h) Lentiviral Particles: sc-29511-V and Trk shRNA (m) Lentiviral Particles: sc-29512-V.

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

SELECT PRODUCT CITATIONS


RESEARCH USE

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

DATA

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

TRK (B-3): sc-7268. Western blot analysis of Trk expression in PC-12 (A), H4 (B), SK-N-SH (C) and U-87 MG (D) whole cell lysates.

TRK (B-3): sc-7268. Immunofluorescence staining of methanol-fixed RAW 264.7 cells showing membrane localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells and cells in granular layer (B).

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