

## Trk B (794): sc-12

### 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: NTRK2 (human) mapping to 9q21.33; Ntrk2 (mouse) mapping to 13 B1.

### SOURCE

Trk B (794) is available as either rabbit (sc-12) or goat (sc-12-G) polyclonal affinity purified antibody raised against a peptide mapping within the C-terminal cytoplasmic domain of Trk B of mouse origin.

### PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.<sup>1</sup>

Blocking peptide available for competition studies, sc-12 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Trk B (794) is recommended for detection of the Trk B splice variants L1 and L10 of mouse origin, Trk B gp145 of rat origin and Trk B of 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); non cross-reactive with Trk B splice variants L10 of mouse origin, Trk B gp95 of rat origin, Trk B-T1 or Trk B T-Shc of human origin, Trk A or Trk C.

Trk B (794) is also recommended for detection of Trk B in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Trk B siRNA (h): sc-36728, Trk B siRNA (m): sc-36729, Trk B shRNA Plasmid (h): sc-36728-SH, Trk B shRNA Plasmid (m): sc-36729-SH, Trk B shRNA (h) Lentiviral Particles: sc-36728-V and Trk B shRNA (m) Lentiviral Particles: sc-36729-V.

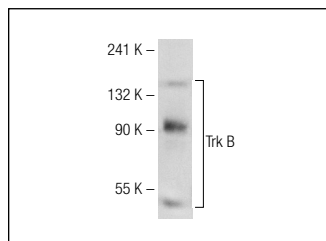
Molecular Weight of Trk B splice variants: 95-145 kDa.

Positive Controls: rat brain extract: sc-2392, rat cerebellum extract: sc-2398 or mouse brain extract: sc-2253.

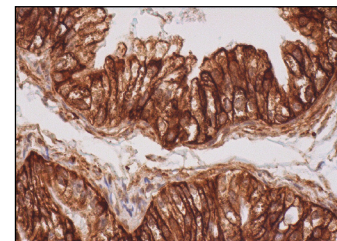
### STORAGE

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

### DATA



Trk B (794)-G: sc-12-G. Western blot analysis of Trk B expression in rat brain tissue extract.



Trk B (794)-G: sc-12-G. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing membrane and cytoplasmic staining of glandular cells.

### SELECT PRODUCT CITATIONS

1. Ministerial Meeting on Population of the Non-Aligned Movement (1993: Bali). 1994. Denpasar Declaration on Population and Development. Integration 40: 27-29.
2. Garcia, N., et al. 2010. The interaction between tropomyosin-related kinase B receptors and presynaptic muscarinic receptors modulates transmitter release in adult rodent motor nerve terminals. J. Neurosci. 30: 16514-16522.
3. Dagnell, C., et al. 2010. Neurotrophins and neurotrophin receptors in pulmonary sarcoidosis-granulomas as a source of expression. Respir. Res. 11: 156.
4. Zhang, Q.G., et al. 2010. Positive modulation of AMPA receptors prevents downregulation of GluR2 expression and activates the Lyn-ERK1/2-CREB signaling in rat brain ischemia. Hippocampus 20: 65-77.
5. Amoureux, S., et al. 2011. Vascular BDNF expression and oxidative stress during aging and the development of chronic hypertension. Fundam. Clin. Pharmacol. 26: 227-234.
6. Hu, X.L., et al. 2011. Conditional deletion of NRSF in forebrain neurons accelerates epileptogenesis in the kindling model. Cereb. Cortex. 21: 2158-2165.
7. 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.



Try **Trk B (F-1): sc-377218** or **Trk B (H-8): sc-136990**, our highly recommended monoclonal alternatives to Trk B (794).