

NT-3 (L-15): sc-13381

BACKGROUND

Neurotrophins function to regulate naturally occurring cell death of neurons during development. The prototype neurotrophin is nerve growth factor (NGF), originally discovered in the 1950s as a soluble peptide promoting the survival of, and neurite outgrowth from, sympathetic ganglia. Three additional structurally homologous neurotrophic factors have been identified. These include brain-derived neurotrophic factor (BDNF), neurotrophin-3 (NT-3) and neurotrophin-4 (NT-4) (also designated NT-5). These various neurotrophins stimulate the *in vitro* survival of distinct, but partially overlapping, populations of neurons. The cell surface receptors through which neurotrophins mediate their activity have been identified. For instance, the Trk A receptor is the preferential receptor for NGF, but also binds NT-3 and NT-4. The Trk B receptor binds both BDNF and NT-4 equally well, and binds NT-3 to a lesser extent, while the Trk C receptor only binds NT-3.

REFERENCES

1. Oppenheim, R.W., et al. 1991. Cell death during development of the nervous system. *Annu. Rev. Neurosci.* 14: 453-501.
2. Thoenen, H., et al. 1991. The changing scene of neurotrophic factors. *Trends Neurosci.* 14: 165-170.
3. Chao, M.V., et al. 1992. Neurotrophin receptors: a window into neuronal differentiation. *Neuron* 9: 583-593.
4. Korsching, S., et al. 1993. The neurotrophic factor concept: a reexamination. *J. Neurosci.* 13: 2739-2748.
5. Ip, N.Y., et al. 1993. Similarities and differences in the way neurotrophins interact with the Trk receptors in neuronal and nonneuronal cells. *Neuron* 10: 137-149.
6. Klein, R., et al. 1994. Role of neurotrophins in mouse neuronal development. *FASEB J.* 8: 738-744.
7. Götz, R., et al. 1994. The conservation of neurotrophic factors during vertebrate evolution. *Comp. Biochem. Physiol.* 108C: 1-10.

CHROMOSOMAL LOCATION

Genetic locus: NTF3 (human) mapping to 12p13.31; Ntf3 (mouse) mapping to 6 F3.

SOURCE

NT-3 (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NT-3 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.

Blocking peptide available for competition studies, sc-13381 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NT-3 (L-15) is recommended for detection of NT-3 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).

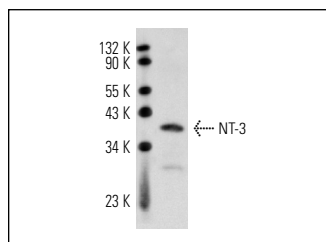
NT-3 (L-15) is also recommended for detection of NT-3 in additional species, including equine, canine, bovine, porcine, avian and feline.

Suitable for use as control antibody for NT-3 siRNA (h): sc-42125, NT-3 siRNA (m): sc-42126, NT-3 shRNA Plasmid (h): sc-42125-SH, NT-3 shRNA Plasmid (m): sc-42126-SH, NT-3 shRNA (h) Lentiviral Particles: sc-42125-V and NT-3 shRNA (m) Lentiviral Particles: sc-42126-V.

Molecular Weight of NT-3: 35 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411 or Jurkat whole cell lysate: sc-2204

DATA



NT-3 (L-15): sc-13381. Western blot analysis of human recombinant NT-3.

SELECT PRODUCT CITATIONS

1. Duprey-Díaz, M.V., et al. 2003. Neurotrophin-3 and Trk C in the frog visual system: changes after axotomy. *Brain Res.* 982: 54-63.

STORAGE

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

MONOS
Satisfaction
Guaranteed

Try **NT-3 (J1407): sc-80250**, our highly recommended monoclonal alternative to NT-3 (L-15).