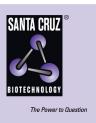
SANTA CRUZ BIOTECHNOLOGY, INC.

NT-4 (T-11): sc-33342



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 neurotrophis 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

- Oppenheim, R.W. 1991. Cell death during development of the nervous system. Annu. Rev. Neurosci. 14: 453-501.
- Thoenen, H. 1991. The changing scene of neurotrophic factors. Trends Neurosci. 14: 165-170.
- Chao, K.K., Cheung, E., Armstrong, W.B. and Wong, B.J. 1992. Neurotrophin receptors: a window into neuronal differentiation. Neuron 9: 583-593.
- Korsching, S. 1993. The neurotrophic factor concept: a reexamination. J. Neurosci. 13: 2739-2748.
- Ip, N.Y., Stitt, T.N., Tapley, P., Klein, R., Glass, D.J., Fandl, J., Greene, L.A., Barbacid, M. and Yancopoulos, G.D. 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. 1994. Role of neurotrophins in mouse neuronal development. FASEB J. 8: 738-744.

CHROMOSOMAL LOCATION

Genetic locus: NTF5 (human) mapping to 19q13.33; Ntf5 (mouse) mapping to 7 B4.

SOURCE

NT-4 (T-11) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of NT-4 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33342 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

NT-4 (T-11) is recommended for detection of NT-4 and, to a lesser extent, NT-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-4 (T-11) is also recommended for detection of NT-4 and, to a lesser extent, NT-6 in additional species, including canine and porcine.

Molecular Weight of NT-4: 14 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfation Guaranteed

Try NT-4 (C-1): sc-365444, our highly recommended monoclonal aternative to NT-4 (T-11).