



NGF (h): 293T Lysate: sc-115152

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. 1991. Cell death during development of the nervous system. *Annu. Rev. Neurosci.* 14: 453-501.
2. Thoenen, H. 1991. The changing scene of neurotrophic factors. *Trends Neurosci.* 14: 165-170.
3. Chao, M.V. 1992. Neurotrophin receptors: a window into neuronal differentiation. *Neuron* 9: 583-593.
4. Korsching, S. 1993. The neurotrophic factor concept: a reexamination. *J. Neurosci.* 13: 2739-2748.
5. 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 non-neuronal cells. *Neuron* 10: 137-149.
6. Klein, R. 1994. Role of neurotrophins in mouse neuronal development. *FASEB J.* 8: 738-744.
7. Götz, R. and Scharf, M. 1994. The conservation of neurotrophic factors during vertebrate evolution. *Comp. Biochem. Physiol.* 108C: 1-10.
8. von Boyen, G.B., Steinkamp, M., Reinshagen, M., Schafer, K.H., Adler, G. and Kirsch, J. 2006. Nerve growth factor secretion in cultured enteric glia cells is modulated by proinflammatory cytokines. *J. Neuroendocrinol.* 18: 820-825.
9. Kangavari, S., Oh, Y.S., Zhou, S., Youn, H.J., Lee, M.Y., Jung, W.S., Rho, T.H., Hong, S.J., Kar, S., Kerwin, W.F., Swerdlow, C.D., Gang, E.S., Gallik, D.M., Goodman, J.S., Chen, Y.D. and Chen, P.S. 2006. Radiofrequency catheter ablation and nerve growth factor concentration in humans. *Heart Rhythm* 3: 1150-1155.

CHROMOSOMAL LOCATION

Genetic locus: NGFB (human) mapping to 1p13.1.

PRODUCT

NGF (h): 293T Lysate represents a lysate of human NGF transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NGF (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive NGF antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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