

CNTF (R-20): sc-1912

BACKGROUND

Ciliary neurotrophic factor, or CNTF, is a neurotrophic cytokine that promotes the survival and differentiation of a number of cell types including sensory, sympathetic and motor neurons. CNTF, LIF and IL-6 belong to a family of cytokines that share structural homology and signal through identical receptor components. The CNTF receptor (CNTFR) is comprised of CNTFR α , a CNTFR-specific chain, and a heterodimer of the gp130 chain common to the IL-6 and LIF receptor and the LIFR β chain. The CNTFR complex has been shown to augment DNA synthesis through the activation of transcription factors Stat1 and Stat3. CNTF has been implicated as a protein involved in the pathogenesis of amyotrophic lateral sclerosis, or ALS. However, unlike mice lacking CNTF, mice containing a homozygous null mutation in the gene encoding the CNTFR α chain die perinatally and display severe motor neuron deficits. This data suggests the existence of a second CNTFR ligand that plays a critical role in development of the neonatal nervous system.

CHROMOSOMAL LOCATION

Genetic locus: CNTF (human) mapping to 11q12.1; Cntf (mouse) mapping to 19 A.

SOURCE

CNTF (R-20) is available as either goat (sc-1912) or rabbit (sc-1912-R) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of CNTF of rat origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1912 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CNTF (R-20) is recommended for detection of CNTF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for CNTF siRNA (h): sc-41921, CNTF siRNA (m): sc-41922, CNTF shRNA Plasmid (h): sc-41921-SH, CNTF shRNA Plasmid (m): sc-41922-SH, CNTF shRNA (h) Lentiviral Particles: sc-41921-V and CNTF shRNA (m) Lentiviral Particles: sc-41922-V.

Molecular Weight of CNTF: 22 kDa.

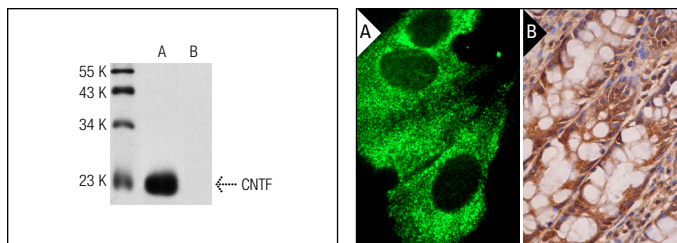
STORAGE

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

RESEARCH USE

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

DATA



CNTF (R-20): sc-1912. Western blot analysis of recombinant rat (A) and human (B) CNTF.

CNTF (R-20): sc-1912. Immunofluorescence staining of methanol-fixed SK-N-SH cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Sakuma, K., et al. 2002. The reciprocal change of neurotrophin-4 and glial cell line-derived neurotrophic factor protein in the muscles, spinal cord and cerebellum of the dy mouse. *Acta Neuropathol.* 104: 482-492.
- Toma, H., et al. 2002. Characterization of the neurotrophic response to acute pancreatitis. *Pancreas* 25: 31-38.
- Hafidi, A., et al. 2004. CNTFR α and CNTF expressions in the auditory brainstem: light and electron microscopy study. *Hear. Res.* 194: 14-24.
- ten Asbroek, A.L., et al. 2005. Expression profiling of sciatic nerve in a Charcot-Marie-tooth disease type 1a mouse model. *J. Neurosci. Res.* 79: 825-835.
- Qi, H., et al. 2007. Patterned expression of neurotrophic factors and receptors in human limbal and corneal regions. *Mol. Vis.* 13: 1934-1941.
- Wu, J., et al. 2008. Enhanced transduction and improved photoreceptor survival of retinal degeneration by the combinatorial use of rAAV2 with a lower dose of adenovirus. *Vision Res.* 48: 1648-1654.
- Seitz, R., et al. 2010. Norrin mediates neuroprotective effects on retinal ganglion cells via activation of the Wnt/ β -catenin signaling pathway and the induction of neuroprotective growth factors in Muller cells. *J. Neurosci.* 30: 5998-6010.
- Rana, O.R., et al. 2010. Mechanical stretch induces nerve sprouting in rat sympathetic neurocytes. *Auton. Neurosci.* 155: 25-32.
- Nogueira-Silva, C., et al. 2013. The role of glycoprotein 130 family of cytokines in fetal rat lung development. *PLoS ONE* 8: e67607.


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Try **CNTF (A-11): sc-25286** or **CNTF (G-7): sc-166272**, our highly recommended monoclonal alternatives to CNTF (R-20).