

# CNTF (FL-200): sc-13996

## 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 $\alpha$ , a CNTFR-specific chain, and a heterodimer of the gp130 chain common to the IL-6 and LIF receptor and the LIFR $\beta$  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 $\alpha$  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 (FL-200) is a rabbit polyclonal antibody raised against amino acids 1-200 representing full length CNTF of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

CNTF (FL-200) 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  $\mu$ g per 100-500  $\mu$ 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).

CNTF (FL-200) is also recommended for detection of CNTF in additional species, including equine and canine.

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.

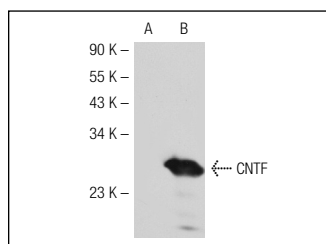
Molecular Weight of CNTF: 22 kDa.

Positive Controls: CNTF (h): 293T Lysate: sc-111465.

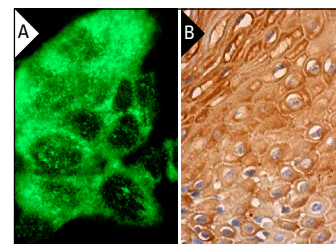
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



CNTF (FL-200): sc-13996. Western blot analysis of CNTF expression in non-transfected: sc-117752 (A) and human CNTF transfected: sc-111465 (B) 293T whole cell lysates.



CNTF (FL-200): sc-13996. Immunofluorescence staining of methanol-fixed SK-N-SH cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells (B).

## SELECT PRODUCT CITATIONS

1. Larsen, J.V., et al. 2010. Sortilin facilitates signaling of ciliary neurotrophic factor and related helical type 1 cytokines targeting the gp130/leukemia inhibitory factor receptor  $\beta$  heterodimer. *Mol. Cell. Biol.* 30: 4175-4187.
2. Srivastava, V., et al. 2011. Suppressors of cytokine signaling inhibit effector T cell responses during *Mycobacterium tuberculosis* infection. *Immunol. Cell Biol.* 89: 786-791.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **CNTF (A-11): sc-25286** or **CNTF (G-7): sc-166272**, our highly recommended monoclonal alternatives to CNTF (FL-200).