

# Ciliary Neurotrophic Factor

Human, Recombinant (rHuCNTF)

Expressed in *E. coli*

Cat. No. CRP0876

Lot. No. (See product label)

## PRODUCT INFORMATION

**Description:** Ciliary neurotrophic factor (CNTF) is a polypeptide initially purified from chick embryo ocular tissue and identified as a trophic factor for embryonic chick ciliary parasympathetic neurons in culture. Subsequent studies have demonstrated that CNTF is a survival factor for additional neuronal cell types including: dorsal root ganglion sensory neurons, sympathetic ganglion neurons, embryonic motor neurons, major pelvic ganglion neurons and hippocampal neurons. CNTF has also been shown to prevent the degeneration of motor axons after axotomy.

**Amino-Acid Sequence:** 199 aa, non-glycosylated

**M. W. :** 22,800 Da

**Recombinant:** Expressed in *E. coli*

**Purity:** >97% by SDS-PAGE and HPLC analyses.

**Formulation:** Lyophilized from a 0.2mm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.

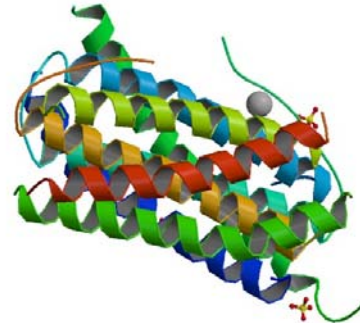
**Biological Activity:** Fully biologically active when compared to standard. The ED50 as determined by the dose-dependant stimulation of TF-1 cells is less than 3.0 ng/ml.

**Endotoxin:** Less than 1EU/mg of rHuCNTF as determined by LAL method.

**Reconstitution:** We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at  $\leq -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

**Storage:** This lyophilized preparation is stable for several weeks at 2-8°C, but should be kept at  $-20^{\circ}\text{C}$  for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at  $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$ . Avoid repeated freeze/thaw cycles.

## FOR RESEARCH USE ONLY



[PDB](#) rendering based on 1cnt.

## GENE INFORMATION

**Gene Name:** [CNTF](#)

**Synonyms:** HCNTF, OTTHUMP00000174731, ciliary neurotrophic factor

**mRNA Refseq:** [NM\\_000614.2](#)

**Protein Refseq:** [NP\\_000605.1](#)

**MIM:** [118945](#)

**GeneID:** [1270](#)

**Uniprot ID:** [P26441](#)

**Chromosome Location:** 11q12.2

**Pathway:** Cytokine-cytokine receptor interaction, Jak-STAT signaling pathway

**Function:** ciliary neurotrophic factor receptor binding, growth factor activity, protein binding.

## REFERENCES

1. Sendtner M, Carroll P, Holtmann B, et al. Ciliary neurotrophic factor. *J. Neurobiol.* 1995; 25 (11): 1436-1453.
2. Sleeman MW, Anderson KD, Lambert PD, et al. The ciliary neurotrophic factor and its receptor, CNTFR alpha. *Pharmaceutica acta Helvetiae* 2000; 74 (2-3): 265-272.
3. Schooltink H, Stoyan T, Roeb E, et al. Ciliary neurotrophic factor induces acute-phase protein expression in hepatocytes. *FEBS Lett.* 1993; 314 (3): 280-284.
4. Bazan JF. Neuropoietic cytokines in the hematopoietic fold. *Neuron* 1991; 7 (2): 197-208.

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