

# Recombinant Mouse Ciliary Neurotrophic Factor (rm CNTF)

**Synonyms:** HCNTF

**Introduction:** CNTF is a polypeptide hormone whose actions appear to be restricted to the nervous system where it promotes neurotransmitter synthesis and neurite outgrowth in certain neuronal populations. The protein is a potent survival factor for neurons and oligodendrocytes and may be relevant in reducing tissue destruction during inflammatory attacks. A mutation in this gene, which results in aberrant splicing, leads to ciliary neurotrophic factor deficiency, but this phenotype is not causally related to neurologic disease. In addition to the predominant monocistronic transcript originating from this locus, the gene is also co-transcribed with the upstream ZFP91 gene. Co-transcription from the two loci results in a transcript that contains a complete coding region for the zinc finger protein but lacks a complete coding region for ciliary neurotrophic factor. CNTF is a survival factor for various neuronal cell types. Seems to prevent the degeneration of motor axons after axotomy.

**Description:** Ciliary Neurotrophic Factor Recombinant Mouse produced in E.Coli is a single, non-glycosylated polypeptide chain containing 198 amino acids and having a molecular mass of 22.6kDa. The CNTF is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder..

**Formulation:** Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.

**Solubility:** It is recommended to reconstitute the lyophilized CNTF in sterile 18M-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized Ciliary Neurotrophic Factor although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CNTF should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

**Purity:** Greater than 97.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**Amino Acid Sequence:** MAFAEQSPLT LHRRDLCSRS IWLARKIRSD LTALMESYVK HQGLNKNISL DSVDGVPVAS TDRWSEMTEA ERLQENLQAY RTFQGMLTKL LEDQRVHFTP TEGDFHQAIH TLTLQVSAFA YQLEELMALL EQKVPEKEAD GMPVTIGDGG LFEKKLWGLK VLQELSQWTV RSIHDLRVIS SHHMGISAHE SHYGAKQM

**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 35ng/ml, corresponding to a Specific Activity of  $3.0 \times 10^4$  IU/mg.

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<i>small</i>	5 µg	Cat.N°	12343420
<i>medium</i>	25 µg	Cat.N°	12343424

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