

## Recombinant Rat Ciliary Neurotrophic Factor (rr 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 and seems to prevent the degeneration of motor axons after axotomy.

**Description:** Recombinant rat CTNF produced in E.Coli is a single, non-glycosylated polypeptide chain containing 200 amino acids and having a molecular mass of 22834 Dalton. The CNTF is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*

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

**Formulation:** Lyophilized from a concentrated (1mg/ml) solution in water containing 0.025% NaHCO<sub>3</sub>. The aliquotes of 1µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized CNTF in sterile water or 0.4% NaHCO<sub>3</sub> adjusted to pH 8-9, not less than 100µg/ml which can then be further diluted to other aqueous solutions, preferably in presence of carrier protein.

**Stability:** Lyophilized rat CNTF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rat CNTF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

**Purity:** Greater than 99.0% as determined by Gel Filtration and by SDS-PAGE.

**Amino Acid:** AFAEQTPLTL HRRDLSSRSIWLARKIRSDLTALMESYVKHQGLNKNI  
 NLDSVDGVPVASTDRWSEMTEAERLQENLQAYRTFQGMLTKLLEDQRV  
 HFTPTEGDFHQAIHTLMLQVSAFAYQLEELMVLLLEQKIPENEADGMPA  
 TVGDGGLFEKKLWGLKVLQELSQWTVRSIHDLRVISSHQMGISALESH  
 YGAKDKQM

**Biological Activity :** Fully biologically active by its ability to phosphorylate STAT3 in several cells lines.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	5 µg	Cat.N°	13343420
<i>medium</i>	25 µg	Cat.N°	13343424

**ImmunoTools** Excellent Quality - Advantageously priced

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