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## Product Data Sheet

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Product Name: CNTF Human  
 Cat. No.: GP20134  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	HCNTF; CNTF; Ciliary Neurotrophic Factor.		
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Met-Ala-Phe-Thr-Glu.		
Solubility	It is recommended to reconstitute the lyophilized HCNTF in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	Lyophilized from a concentrated (1mg/ml) solution in water containing 5mM sodium Phosphate buffer pH=7.5 and 5mM sodium chloride.		

### 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.

### Biological Activity

The ED<sub>50</sub> as determined by the dose-dependant stimulation of TF-1 cells is < 2 ng/ml,

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corresponding to a Specific Activity of 500,000IU/mg.

### Stability

Lyophilized Ciliary Neurotrophic Factor although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution CNTF should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . Please prevent freeze-thaw cycles.

### Background

Ciliary Neurotrophic Factor Recombinant Human produced in E.Coli is a single, non-glycosylated polypeptide chain containing 199 amino acids and having a molecular mass of 22706 Dalton. The CNTF is purified by proprietary chromatographic techniques.

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