

# Recombinant Rat CNTF Protein

Catalog No.: RP01671 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Rat	25707	P20294

### Tags

C-6His

### Synonyms

CNTF

## Product Information

Source	Purification
<i>E. coli</i>	> 95% by SDS-PAGE.

### Endotoxin

&lt;1EU/μg

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

## Contact

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## Background

Ciliary neurotrophic factor (CNTF) is a member of the cytokine family. It is a polypeptide hormone that has functions in promoting neurotransmitter synthesis and neurite outgrowth in certain neuronal populations. Its actions appear to be restricted to the nervous system. Ciliary neurotrophic factor (CNTF) has biological effects through the activation of a multi-subunit receptor complex, consisting of an extracellular CNTF binding subunit (CNTFα) and two transmembrane signal transduction proteins: glycoprotein gp130 and LIF receptor. CNTF is considered as a potent survival factor of neurons and oligodendrocyte and may be relevant in reducing tissue destruction during inflammatory attacks. CNTF also is a survival factor for neurons of the peripheral sensory sympathetic and ciliary ganglia. It has been reported that CNTF could be an agent that has therapeutic potential and possibly induces differentiation of large multipolar ganglionic phenotype in a subset of progenitors.

## Basic Information

### Description

Recombinant Rat CNTF Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Met1-Met200) of rat CNTF (Accession #NP\_037298.1) fused with and a 6×His tag at the C-terminus.

### Bio-Activity

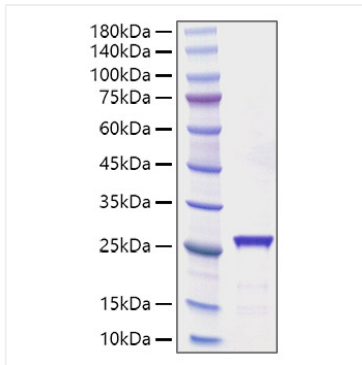
Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED<sub>50</sub> for this effect is 14.08-56.34 ng/mL.

### Storage

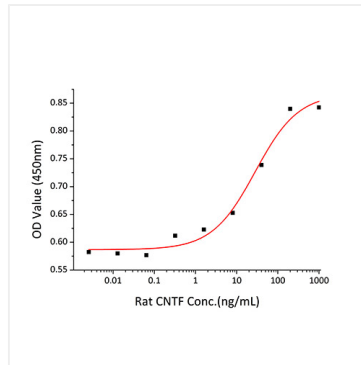
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Rat CNTF Protein was determined by SDS-PAGE with Coomassie Blue, showing bands at 26 kDa.



Recombinant Rat CNTF stimulates cell proliferation of the TF-1 human erythroleukemic cells. The  $ED_{50}$  for this effect is 14.08-56.34 ng/mL, corresponding to a specific activity of  $6.25 \times 10^4$ - $0.25 \times 10^6$  units/mg.