# Recombinant Murine Ciliary Neurotrophic Factor

**#R00275**

Size: 5 μg/100 μg/500 μg

## Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**Warning:** This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

## Background

Ciliary neurotrophic factor (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. CNTF was initially identified as a trophic factor for embryonic chick ciliary parasympathetic neurons in culture. Furthermore, the protein is also a potent survival factor for neurons and oligodendrocytes and may be relevant in reducing tissue destruction during inflammatory attacks. In addition, CNTF is useful for treatment of motor neuron disease and it could reduce food intake without causing hunger or stress. Recombinant murine CNTF containing 198 amino acids and it shares 82 % and 95 % a.a. sequence identity with human and rat CNTF.

## AA Sequence

AFAEQSPLTLHRRDLCSRSIWLARKIRSDLTALMESYV KHQGLNKNISLDSVDGVPVASTDRWSEMTEAERLQE NLQAYRTFQGMLTKLLEDQRVHFTPTEGDFHQAIHTL TLQVSAFAYQLEELMALLEQKVPEKEADGMPVTIGDG GLFEKKLWGLKVLQELSQWTVRSIHDLRVISSHHMGI SAHESHYGAKQM

## 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 ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

## Product Specification

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| **Accession** | P51642 |
| **GeneID** | 12803 |
| **Species** | Murine |
| **Source** | Escherichia coli. |
| **Molecular Weight** | Approximately 22.5 kDa, a single non-glycosylated polypeptide chain containing 197 amino acids. |
| **Purity** | > 95 % by SDS-PAGE and HPLC analyses. |
| **Biological Activity** | Fully biologically active when compared to standard. The $ED_{50}$ as determined by a cell proliferation assay using human TF-1 cells is less than 30 ng/ml, corresponding to a specific activity of > $3.3 \times 10^4$ IU/mg. |
| **Physical** | Sterile Filtered White lyophilized |

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| **Appearance** | (freeze-dried) powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl, with 5 % Trehalose, 0.02 % Tween-20. |
| **Endotoxin** | Less than 1 EU/μg of rMuCNTF as determined by LAL method. |