

Recombinant Human Ciliary Neurotrophic Factor

#R00163

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. It was initially identified as a trophic factor for embryonic chick ciliary parasympathetic neurons in culture. 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. CNTF is structurally related to IL-6, IL-11, LIF and OSM. All of these four helix bundle cytokines share gp130 as a signal-transducing subunit in their receptor complexes. Recombinant human CNTF containing 200 amino acids and it shares 82 % and 83 % a.a. sequence identity with mouse and rat CNTF.

AA Sequence

MAFTEHSPLTPHRRDLCSRSIWLARKIRSDLTALTESY
VKHQGLNKNINLDSADGMPVASTDQWSELTEAERLQ
ENLQAYRTFHVLLARLLEDQQVHFTPTGEDFHQAIHT
LLLQVAAFAYQIEELMILLEYKIPRNEADGMPINVGDG
GLFEKKLWGLKVLQELSQWTVRSIHDLRFISSHQTGI
PARGSHYIANNKKM

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

Synonyms	CNTF
Accession	P26441
GeneID	1270
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 22.9 kDa, a single non-glycosylated polypeptide chain containing 200 amino acids.
Purity	> 97 % 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 150 ng/ml, corresponding to a specific activity of > 6.7 × 10 ³ IU/mg.

Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/µg of rHuCNTF as determined by LAL method.
