

Recombinant Human CNTF

Information

Gene ID	1270
Accession #	P26441
Alternate Names	CNTF
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 22.9 kDa, a single non-glycosylated polypeptide chain containing 200 amino acids.
AA Sequence	MAFTEHSPLT PHRRDLCRS IWLARKIRSD LTALTESYVK HQGLNKNINL DSADGMPVAS TDQWSELTEA ERLQENLQAY RTFHVLLARL LEDQQVHFTP TEGDFHQAIH TLLLQVAAFA YQIEELMILL EYKIPRNEAD GMPINVGDGG LFEKKLWGLK VLQELSQWTV RSIHDLRFIS SHQTGIPARG SHYIANNKKM
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
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.
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.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5 µg	100 µg	500 µg
Recombinant Human CNTF	5 µg	100 µg	500 µg

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Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuCNTF as determined by LAL method.

Description

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.

Reference

1. Lam A, Fuller F, Miller J, et al. 1991. Gene. 102:271-6.
2. Bazan JF. 1991. Neuron. 7:197-208.
3. McGregor NE, Poulton IJ, Walker EC, et al. 2010. Calcif Tissue Int. 86:261-70.
4. Lambert PD, Anderson KD, Sleeman MW, et al. 2001. Proc Natl Acad Sci U S A. 98:4652-7.



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