

Recombinant Rat Ciliary Neurotrophic Factor

#R00335

Size: 5 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.CHAR(10)
- 12 months from date of receipt, -20 to -70 °C as supplied.CHAR(10)
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.CHAR(10)
- 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 rat CNTF containing 199 amino acids and it shares 83 % and 95 % a.a. sequence identity with human and murine CNTF.

AA Sequence

AFAEQTPLTLHRRDLCSRSIWLARKIRSDLTALMESYV

KHQGLNKNINLDSVDGVPVASTDRWSEMTEAERLQE
NLQAYRTFQGMLTKLLEDQQRVHFTPTGDFHQAIHTL
MLQVSAFAYQLEELMVLLEQKIPENEADGMPATVGD
GGLFEKKLWGLKVLQELSQWTVRSIHDLRVISSHQM
GISALESHYGAKDKQM

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 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	P20294
GeneID	25707
Species	Rat
Source	Escherichia coli.
Molecular Weight	Approximately 22.7 kDa, a single non-glycosylated polypeptide chain containing 199 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 × 10 ⁴ IU/mg.

Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 2 × PBS, pH 7.4, 2 % trehalose.
Endotoxin	Less than 1 EU/μg of rRtCNTF as determined by LAL method.