

PRODUCT DATA SHEET



Bioworld Technology, Inc.

Recombinant CNTF, Human

Catalog Number: BK0017-1mg

Source: Escherichia coli.

Quantity: 1mg

Description:

Ciliary Neurotrophic Factor (CNTF) is a cytokine belonging to the Interleukin 6 (IL-6) family, which also includes IL-6, Oncostatin M, Leukemia Inhibitory Factor (LIF), and Cardiotrophin-1. Structurally, CNTF resembles a four-helix bundle composition, similar to the other members of the IL-6 family. The receptor for CNTF is composed of three parts: a gp130-like subunit common in the IL-6 receptor family, a LIF Receptor β subunit, and a CNTF specific α receptor subunit. Upon binding to the CNTF, the β subunit of the CNTF receptor will undergo tyrosine phosphorylation, and activate the intracellular JAK/STAT pathway. The main function of CNTF in vivo is to promote the differentiation and survival of a variety of neurons and glial cells, including sympathetic precursor cells and spinal motor neurons. Recombinant human Ciliary Neurotrophic Factor (rhCNTF) produced in E. coli is a single non-glycosylated polypeptide chain containing 199 amino acids. A fully biologically active molecule, rhCNTF has a molecular mass of 22.8 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Molecular Weight:

22.8 kDa, observed by reducing SDS-PAGE.

Purity:

> 95% as analyzed by SDS-PAGE and HPLC.

Biological Activity:

ED50 < 200 ng/ml, measured cell proliferation assay using TF-1 cells, corresponding to a specific activity of $> 5 \times 10^3$ units/mg.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

Lyophilized after extensive dialysis against PBS.

AA Sequence:

AFTEHSPLTPHRRDLCSRSIWLARKIRSDDL-
TALTESYVKHQGLNKNINLDSADG-
MPVASTDQWSEL-
TEAERLQENLQAYRTFHVLLAR-
LLEDQQVHFTPTGDFHQAIHTLLLQVAFA-
YQIEELMILLEYKIPRNEADGMPINVGDG-
GLFEKKLWGLKVLQELSQWTVRSIHDLRFISSHQ
TGIPARGSHYIANNKKM

Endotoxin:

< 0.2 EU/ μ g, determined by LAL method.

Reconstitution:

Reconstituted in ddH₂O or PBS at 100 μ g/ml.

Storage:

Lyophilized recombinant human Ciliary Neurotrophic Factor (rhCNTF) remains stable up to 6 months at -80 $^{\circ}$ C from date of receipt. Upon reconstitution, rhCNTF remains stable up to 2 weeks at 4 $^{\circ}$ C or up to 3 months at -20 $^{\circ}$ C.

Usage:

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