

CNTF, Human

Cat. No.: Z03139-1

Size: 1.0 mg

Synonyms: Ciliary Neurotrophic Factor

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.

Amino Acid Sequence:

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00001 AFTEHSPLTP HRRDLCSRSI WLARKIRSDL TALTESYVKH
00041 QGLNKNINLD SADGMPVAST DQWSELTEAE RLQENLQAYR
00081 TFHVLLARLL EDQQVHFTPT EGDHFHQAIHT LLLQVAAFAY
00121 QIEELMILLE YKIPRNEADG MPINVGDDGL FEKKLWGLKV
00161 LQELSQWTVR SIHDLRFISS HQTGIPARGS HYIANNKKM
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Source: *E. coli*

Species: Human

Biological Activity: ED₅₀ < 200 ng/ml, measured cell proliferation assay using TF-1 cells, corresponding to a specific activity of > 5×10³ units/mg.

Molecular Weight: 22.8 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

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

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant human Ciliary Neurotrophic Factor (rhCNTF) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhCNTF remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.