

**DATASHEET**  
Version 20181206**CNTF, Human****Cat. No.:** Z03139-10**Size:** 10.0 ug**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  $\beta$  subunit, and a CNTF specific  $\alpha$  receptor subunit. Upon binding to the CNTF, the  $\beta$  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 LLLQVAFAFAY
00121 QIEELMILLE YKIPRNEADG MPINVGDDGL FEKKLWGLKV
00161 LQELSQWTVR SIHDLRFISS HQTGIPARGS HYIANNKKM
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**Source:** *E. coli***Species:** Human**Biological Activity:** ED<sub>50</sub> < 200 ng/ml, measured cell proliferation assay using TF-1 cells, corresponding to a specific activity of > 5×10<sup>3</sup> units/mg.**Molecular Weight:** 22.8 kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH<sub>2</sub>O 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.