

## Ciliary Neurotrophic Factor (CNTF), Human

**Cat.no.** PK0171

**Product size:** 10ug 50ug 1mg

**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 > 5×10<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.

**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.

**Amino Acid Sequence:**

00001 AFTEHSPLTP HRRDLCSRSI WLARKIRSDL TALTESYVKH  
00041 QGLNKNINLD SADGMPVAST DQWSELTEAE RLQENLQAYR  
00081 TFHVLLARLL EDQQVHFTPT EGDFHQAIHT LLLQVAAFAY  
00121 QIEELMILLE YKIPRNEADG MPINVG DGGL FEKKLWGLKV  
00161 LQELSQWTVR SIHDLRFISS HQTGIPARGS HYIANNKKM

**Synonyms:** Ciliary Neurotrophic Factor (CNTF)

**Note:** For research use only, not for use in diagnostic procedure.