

**DESCRIPTION**

<b>Source</b>	<i>E. coli</i> -derived Ala2-Met200 Accession # P26441.1
<b>N-terminal Sequence Analysis</b>	Ala2
<b>Structure / Form</b>	This recombinant protein is prone to proteolytic degradation at the C-terminus, resulting in proteins with molecular masses of 22.2 - 22.8 kDa.
<b>Predicted Molecular Mass</b>	22.8 kDa

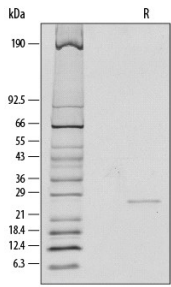
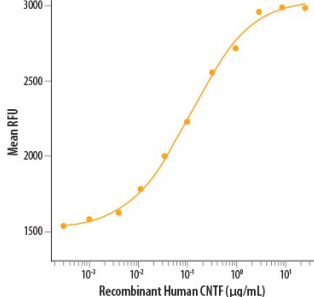
**SPECIFICATIONS**

<b>SDS-PAGE</b>	23-26 kDa, reducing conditions
<b>Activity</b>	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. Kitamura, T. <i>et al.</i> (1989) <i>J. Cell Physiol.</i> <b>140</b> :323. The ED <sub>50</sub> for this effect is typically 0.03-0.18 µg/mL. The proliferative effect can be enhanced up to 100-fold by the addition of Recombinant Human CNTF Rα (Catalog # 303-CR) .  Measured by its ability to support the survival and stimulate neurite outgrowth of dissociated chick embryonic dorsal root ganglia (DRG) neurons. Davies, A.M. (1989) in <i>Neurotrophic Factor Bioassay Using Dissociated Neurons</i> , Nerve Growth Factor. Rush, R.A. (eds): John Wiley and Sons, Ltd. 95. The ED <sub>50</sub> for this effect is typically 1-3 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in Tris, NaCl, TCEP, EDTA, CHAPS and Trehalose. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 100 µg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 3 months, 2 to 8 °C under sterile conditions after reconstitution.</li> </ul>

**DATA**

<p><b>SDS-PAGE</b></p>  <p>1 µg/lane of Recombinant Human CNTF was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a band at 26 kDa.</p>	<p><b>Bioactivity</b></p>  <p>Recombinant Human CNTF (Catalog # 257-NT/CF) stimulates cell proliferation of the TF-1 human erythroleukemic cell line. The ED<sub>50</sub> for this effect is typically 0.03-0.18 µg/mL.</p>
---	---

**BACKGROUND**

Ciliary neurotrophic factor (CNTF) is a polypeptide initially purified from chick embryo ocular tissue and identified as a trophic factor for embryonic chick ciliary parasympathetic neurons in culture. Subsequent studies have demonstrated that CNTF is a survival factor for additional neuronal cell types including: dorsal root ganglion sensory neurons, sympathetic ganglion neurons, embryonic motor neurons, major pelvic ganglion neurons and hippocampal neurons. CNTF has also been shown to prevent the degeneration of motor axons after axotomy.

The gene for human CNTF has been localized to the proximal region of the long arm of chromosome 11. The cDNA for human CNTF encodes a 200 amino acid residue polypeptide that lacks a signal sequence. CNTF is highly conserved across species and exhibits cross-species activities. Human and rat CNTF share approximately 83% homology in their protein sequence. CNTF is structurally related to IL-6, IL-11, LIF and OSM. All of these four helix bundle cytokines share gp130 as a signal-transducing subunit in their receptor complexes.