

PRODUCT INFORMATION



CNTF (human, recombinant)

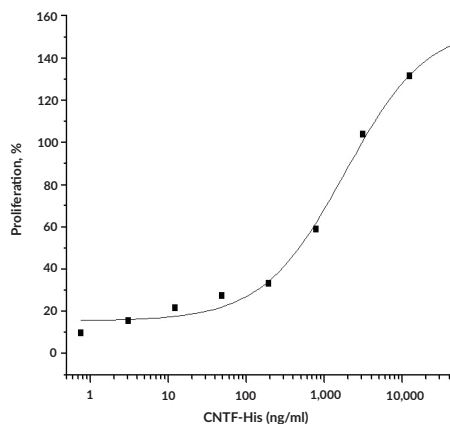
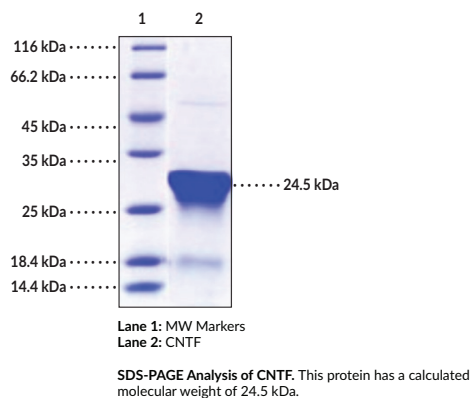
Item No. 42757

Overview and Properties

Synonyms:	Ciliary Neurotrophic Factor
Source:	Active recombinant human N-terminal His-tagged CNTF expressed in <i>E. coli</i>
Amino Acids:	2-200
Uniprot No.:	P26441
Molecular Weight:	24.5 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥90% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Bioactivity:	See figures for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/19/2025

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Ciliary neurotrophic factor (CNTF) is a member of the IL-6 superfamily of cytokines.^{1,2} It is a class-I helical cytokine that contains binding sites for a complex of CNTF receptor α (CNTFR α), glycoprotein 130 (gp130), and leukemia inhibitor factor receptor β (LIFR β).¹ CNTF is expressed in the brain, eyes, bone, and liver, as well as in spinal cord glial cells, astrocytes, Schwann cells, and skeletal muscle. It is involved in neuroprotection, neuroinflammation, neurogenesis, metabolism, and bone remodeling and primarily signals through the JAK/STAT pathway. Recombinant CNTF induces neurite outgrowth in chick embryonic dorsal root ganglion neurons and increases neuron survival in chick embryonic ciliary ganglia *in vitro*.³ Homozygous knockout of *Cntf* decreases facial motor neuron number and forelimb grip strength in mice.⁴ CNTF also decreases body weight, food intake, and serum insulin levels in *ob/ob* mice.⁵ Serum levels of CNTF are increased in patients with amyotrophic lateral sclerosis (ALS).⁶ Cayman's CNTF (human, recombinant) protein can be used for cell-based assays. This protein consists of 214 amino acids and has a calculated molecular weight of 24.5 kDa.

References

1. Pasquin, S., Sharma, M., and Gauchat, J.-F. Ciliary neurotrophic factor (CNTF): New facets of an old molecule for treating neurodegenerative and metabolic syndrome pathologies. *Cytokine Growth Factor Rev.* **26**(5), 507-515 (2015).
2. Pasquin, S., Sharma, M., and Gauchat, J.-F. Cytokines of the LIF/CNTF family and metabolism. *Cytokine* **82**, 122-124 (2016).
3. Masiakowski, P., Liu, H.X., Radziejewski, C., *et al.* Recombinant human and rat ciliary neurotrophic factors. *J. Neurochem.* **57**(3), 1003-1012 (1991).
4. Masu, Y., Wolf, E., Holtmann, B., *et al.* Disruption of the CNTF gene results in motor neuron degeneration. *Nature* **65**(6441), 27-32 (1993).
5. Gloaguen, I., Costa, P., Demartis, A., *et al.* Ciliary neurotrophic factor corrects obesity and diabetes associated with leptin deficiency and resistance. *Proc. Natl. Acad. Sci. U S A* **94**(12), 6456-6461 (1997).
6. Laaksovirta, H., Soinila, S., Hukkanen, V., *et al.* Serum level of CNTF is elevated in patients with amyotrophic lateral sclerosis and correlates with site of disease onset. *Eur. J. Neurol.* **15**(4), 355-359 (2008).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM