

Contents

1. Description

1.1 Background information

1.2 Applications

1. Description

Products	Human CNTF, research grade. Recombinant human ciliary neurotrophic factor.										
	<table border="1"> <thead> <tr> <th>Content in µg</th><th>Order no.</th></tr> </thead> <tbody> <tr> <td>5</td><td>130-096-337</td></tr> <tr> <td>20</td><td>130-096-336</td></tr> <tr> <td>100</td><td>130-108-972</td></tr> <tr> <td>1000</td><td>130-123-659</td></tr> </tbody> </table>	Content in µg	Order no.	5	130-096-337	20	130-096-336	100	130-108-972	1000	130-123-659
Content in µg	Order no.										
5	130-096-337										
20	130-096-336										
100	130-108-972										
1000	130-123-659										
Biological activity	The ED ₅₀ is ≤150 ng/mL corresponding to an activity of ≥6.6×10 ³ U/mg. ▲ Note: The ED ₅₀ is determined by proliferation assay using human TF-1 cells.										
Primary structure	Single, non-glycosylated polypeptide chain (199 amino acid residues).										
Molecular mass	22.8 kDa.										
Source	Produced in <i>E. coli</i> .										
Product format	Lyophilized from a filtered (0.2 µm) buffer solution.										
Stabilizer	None.										
Purity	>97% as determined by SDS-PAGE analysis.										
Endotoxin level	Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.										
Storage	Lyophilized Human CNTF, research grade should be stored at -20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at -20 °C or below. Avoid repeated freeze-thaw cycles.										
Reconstitution	It is recommended to reconstitute lyophilized Human CNTF, research grade with deionized sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 50 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.										

1.1 Background information

Ciliary neurotrophic factor (CNTF), also known as membrane-associated neurotransmitter stimulating factor (MANS), is a potent neural factor that was initially purified from chick embryo

ocular tissue. In terms of neuronal specificity CNTF overlaps with neurotrophins, although its cellular localisation, receptor structure, and signaling pathway are distinct from those of the neurotrophin family. The CNTFα receptor has been localized to skeletal muscles and to the nervous system. One receptor subunit is known as gp130 which is also a component of receptors for the leukaemia inhibitory factor (LIF), interleukin 6 (IL-6), interleukin 11 (IL-11), and oncostatin M (OSM). CNTF is present in normal peripheral nerves, localised mainly in the cytoplasm of myelin-associated Schwann cells as well as astrocytes in the central nervous system. It promotes the survival of neurons and oligodendrocytes as well as sensory neurons, motor neurons, basal forebrain neurons, and type 2 astrocytes. CNTF is highly conserved across species and exhibits cross-species activity.

1.2 Applications

Human CNTF may be used for a variety of applications, including:

- Survival factor for neurons and oligodendrocytes.
- Promotion of neurotransmitter synthesis and neurite outgrowth in neuronal populations including astrocytes.
- Growth promotion of parasympathetic neurons and sympathetic, sensory, and spinal motor neurons *in vitro*.
- Differentiation of progenitor cells in oligodendrocytes or astrocytes.

Optimal concentration for a specific application should be determined by a dose-response experiment.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

Legal notices

Limited product warranty

Miltenyi Biotec B.V. & Co. KG and/or its affiliate(s) warrant this product to be free from material defects in workmanship and materials and to conform substantially with Miltenyi Biotec's published specifications for the product at the time of order, under normal use and conditions in accordance with its applicable documentation, for a period beginning on the date of delivery of the product by Miltenyi Biotec or its authorized distributor and ending on the expiration date of the product's applicable shelf life stated on the product label, packaging or documentation (as applicable) or, in the absence thereof, ONE (1) YEAR from date of delivery ("Product Warranty"). Miltenyi Biotec's Product Warranty is provided subject to the warranty terms as set forth in Miltenyi Biotec's General Terms and Conditions for the Sale of Products and Services available on Miltenyi Biotec's website at www.miltenyibiotec.com, as in effect at the time of order ("Product Warranty"). Additional terms may apply. BY USE OF THIS PRODUCT, THE CUSTOMER AGREES TO BE BOUND BY THESE TERMS.

THE CUSTOMER IS SOLELY RESPONSIBLE FOR DETERMINING IF A PRODUCT IS SUITABLE FOR CUSTOMER'S PARTICULAR PURPOSE AND APPLICATION METHODS.

Technical information

The technical information, data, protocols, and other statements provided by Miltenyi Biotec in this document are based on information, tests, or experience which Miltenyi Biotec believes to be reliable, but the accuracy or completeness of such information is not guaranteed. Such technical information and data are intended for persons with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. Miltenyi Biotec shall not be liable for any technical or editorial errors or omissions contained herein.

All information and specifications are subject to change without prior notice. Please contact Miltenyi Biotec Technical Support or visit www.miltenyibiotec.com for the most up-to-date information on Miltenyi Biotec products.

Licenses

This product and/or its use may be covered by one or more pending or issued patents and/or may have certain limitations. Certain uses may be excluded by separate terms and conditions. Please contact your local Miltenyi Biotec representative or visit Miltenyi Biotec's website at www.miltenyibiotec.com for more information.

The purchase of this product conveys to the customer the non-transferable right to use the purchased amount of the product in research conducted by the customer (whether the customer is an academic or for-profit entity). This product may not be further sold. Additional terms and conditions (including the terms of a Limited Use Label License) may apply.

CUSTOMER'S USE OF THIS PRODUCT MAY REQUIRE ADDITIONAL LICENSES DEPENDING ON THE SPECIFIC APPLICATION. THE CUSTOMER IS SOLELY RESPONSIBLE FOR DETERMINING FOR ITSELF WHETHER IT HAS ALL APPROPRIATE LICENSES IN PLACE. Miltenyi Biotec provides no warranty that customer's use of this product does not and will not infringe intellectual property rights owned by a third party. BY USE OF THIS PRODUCT, THE CUSTOMER AGREES TO BE BOUND BY THESE TERMS.

Trademarks

The Miltenyi Biotec logo is a registered trademark or trademark of Miltenyi Biotec and/or its affiliates in various countries worldwide.

Copyright © 2021 Miltenyi Biotec and/or its affiliates. All rights reserved.