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Recombinant human CNTF protein (Qk063)

Type: Stem cells

Available for purchase: Unit Size (µg): 25, 50, 100, 500, 1000

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Product Information

Ciliary Neurotrophic Factor (CNTF) is a member of the IL-6 family of cytokines. CNTF plays a crucial role in developing and maintaining the nervous system, in particular the optic nervous system. It promotes the maintenance, differentiation, and survival of various neurons, glial cells, and retinal cells. CNTF has been used *in vitro* to initiate neural induction and differentiation. CNTF can be used to culture primary neurons and glial cells such as astrocytes and Schwann cells. It is also used to culture retinal cells and adipocytes.

Human CNTF has a molecular weight of 22.8 kDa. This protein is animal origin-free, carrier-free, tag-free, and non-glycosylated to ensure its purity with exceptional lot-to-lot consistency. Qk063 is suitable for the culture of reproducible and high-quality neurons and other relevant cells.

This protein is also available as GMP compliant Cell Therapy Grade, to enquire email ryan.weber@matriqx.com.

Alternative protein names

Ciliary Neurotrophic Factor, CNTF, HCNTF, Ciliary Neuronotrophic Factor, Qk63

Molecular weight

22.8 kDa (monomer)

Protein Uniprot number

High purity species protein (Uniprot: P26441)

Species reactivity

- human
- species similarity:
- mouse - 81%
- rat - 84%
- bovine - 73%
- porcine - 82%

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from HEPES, NaCl

Reconstitution instructions

- Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml

Featured applications

- Neural stem cell proliferation and neuronal differentiation
- Differentiation of iPSC derived neural progenitors to neurons
- Differentiation of iPSC-derived Schwann cells and astrocytes
- Culture of retinal cells
- Induction of axonal growth
- Neural stem cell research

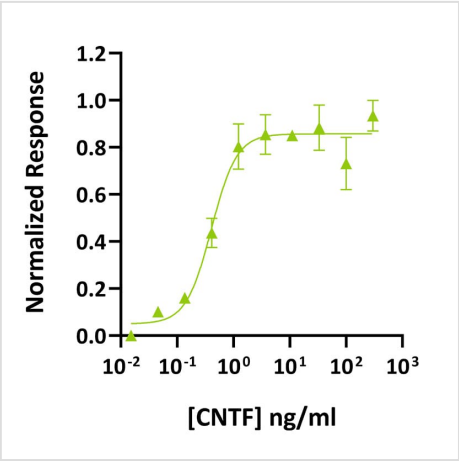
Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

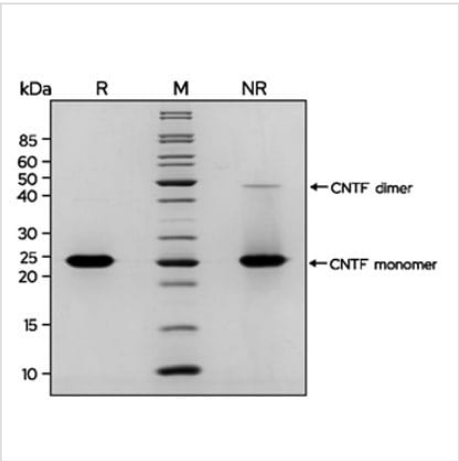
Bioactivity

CNTF activity was determined using the CNTF-responsive firefly luciferase reporter assay. HEK293T cells were treated in triplicate with a serial dilution of CNTF overnight. Firefly luciferase activity was measured and normalised to the control Renilla luciferase activity. EC50 = 0.41 ng/ml (18 pM). Data from Qk063 lot #204526.



Purity

Recombinant CNTF migrates as a major band at approximately 22.8 kDa (monomer) in non-reducing (NR) conditions. The dimeric form is the minor band at the higher molecular weight (45.6 kDa). Upon reduction (R), only the 22.8 kDa band is visible. No contaminating protein bands are present. The purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk063 batch #204526.



Original product page: https://ryan.calliope-alpha.ts.net/product/recombinant-human-cntf-protein-qk063/

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