Product Information

Ciliary Neurotrophic Factor, human recombinant, expressed in E. coli

Catalog Number C3710
Storage Temperature –20 °C

Synonym: CNTF

Product Description
Ciliary neurotrophic factor (CNTF) was initially characterized as a survival factor for chick ciliary neurons in vitro, but has since been shown to promote the survival of a variety of other neuronal cell types, including dorsal root ganglion sensory neurons, embryonic motor neurons, and hippocampal neurons.

It has also been shown to inhibit the proliferation of E7 chick sympathetic neurons, induce the expression of vasoactive intestinal peptide immunoreactivity, and promote the differentiation of bipotential 02A progenitor cells to type-2-astrocytes in vitro. 1

Recombinant, human CNTF is produced by the expression of a DNA sequence that encodes a 200 amino acid residue polypeptide lacking a signal sequence. It is highly conserved across species and exhibits cross-species interaction.

It is lyophilized from a 0.2 µm-filtered solution of 5 mM sodium phosphate, pH 7.5, containing 75 mM sodium chloride and 0.5 mg bovine serum albumin (BSA) as a carrier protein.

Purity: ≥97% (SDS-PAGE)

EC50: 50–150 ng/mL

The biological activity of CNTF is measured in a cell proliferation assay using a factor-dependent human erythroleukemic cell line, TF-1. 2 The EC50 is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell-based bioassay. CNTF has been demonstrated to support the survival and stimulate neurite outgrowth of cultured embryonic chick dorsal root ganglia.

Endotoxin: ≤1 ng/µg of growth factor

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
Reconstitute the contents of the vial using 0.2 µm filtered PBS containing 0.1% HSA or BSA to a concentration ≥25 µg/mL.

Storage/Stability
Prior to reconstitution, store at –20 °C for a maximum of 6 months.

After reconstitution, store at 2–8 °C for no more than 1 month. For extended storage, freeze in working aliquots at –70 °C or –20 °C. Repeated freezing and thawing is not recommended.

References

JJJ,TD,MAM 04/12-2

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