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ProductInformation

Ciliary Neurotrophic Factor (CNTF),
Human, Recombinant
Expressed in *E. coli*

Product No. **C 3710**

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 poly-peptide lacking a signal sequence. It is highly conserved across species and exhibits cross-species interaction.

Product Profile

The biological activity of Ciliary Neurotrophic Factor (CNTF) is measured in a cell proliferation assay using a factor-dependent human erythroleukemic cell line, TF-1.[2] The EC_{50} 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.

Reagents

Lyophilized from a 0.2 μm-filtered solution of PBS, pH 7.4 containing 0.5 mg bovine serum albumin (BSA)as a carrier protein.

Reconstitution

Reconstitute the contents of the vial using 0.2 μm-filtered PBS containing 0.1% HSA or BSA to a concentration not less than 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

1. Stöckli, K., et al., Nature, **342**, 920, (1989).
2. Kitamura, T., et al., J. Cell. Physiol., **140**, 323 (1989).

11/02