Cerebral Dopamine Neurotrophic Factor, human recombinant (rHuCDNF)

Catalog No: 97428
Lot No: XXXXX
Source: *E. coli*
Synonyms: Cerebral dopamine neurotrophic factor, arginine-rich, mutated in early stage tumors-like 1, Conserved dopamine neurotrophic factor, ARMET-like protein 1, ARMETL1

Background

CDNF is a member of the ARMET family and acts as a trophic factor for dopamine neurons. CDNF inhibits the 6-hydroxydopamine (6-OHDA)-induced degeneration of dopaminergic neurons. When CDNF controlled after 6-OHDA-lesioning, it reestablishes the dopaminergic function and inhibits the degeneration of dopaminergic neurons in substantia nigra. CDNF is universally expressed in neuronal and non-neuronal tissues. The highest levels in the brain are found in the optic nerve and corpus callosum.

Description

CDNF human recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 161 amino acids and having a molecular mass of 18.5 kDa. CDNF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

CDNF protein was lyophilized from a 0.2 µm filtered concentrated solution in 1xPBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized CDNF in sterile 18 MΩ-cm H_2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized CDNF, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CDNF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 96.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

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QEAGGRPGAD CEVCKEFLNR FYKSLIDRGV NFSLDTIEKE LISFCLDTKG KENRLCYYLG ATKDAATKIL SEVTRPMSVH
MPAMKICEKL KKLDSQICEL KYEKTLDLAS VDLRKMRVAE LKQILHSWGE ECRACAEKTD YVNLIQELAP KYAATHPKTE L
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Activity

Fully biologically active when compared to standard. The ED50 as determined by its ability to stimulate the proliferation of rat C6 cells is 15 - 25 µg/ml, corresponding to a specific activity of 40 - 67 units/mg.

Usage

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