Glial Derived Neurotrophic Factor, human recombinant (rHuGDNF)

Catalog No: 87318
Lot No: XXXXX
Source: *E. coli*
Synonyms: ATF1, ATF2, HFB1-GDNF, GDNF

Background
GDNF promotes the survival and differentiation of dopaminergic neurons in culture, and is able to prevent apoptosis of motor neurons induced by axotomy. The encoded protein is processed to a mature secreted form that exists as a homodimer. The mature form of the protein is a ligand for the product of the RET (rearranged during transfection) protooncogene. In addition to the transcript encoding GDNF, two additional alternative transcripts encoding distinct proteins, referred to as astrocyte-derived trophic factors, have also been described. Mutations in this gene may be associated with Hirschsprung disease. GDNF enhances survival and morphological differentiation of dopaminergic neurons and increases their high-affinity dopamine uptake.

Description
Glial derived Neurotrophic Factor human recombinant produced in ***E. coli*** is a homodimer, non-glycosylated, polypeptide chain containing 2 x 135 amino acids and having a total molecular mass of 30.360 Dalton. GDNF is purified by proprietary chromatographic techniques.

Physical Appearance
Sterile filtered white lyophilized (freeze-dried) powder.

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

Solubility
It is recommended to reconstitute the lyophilized GDNF 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 Glial-derived Neurotrophic Factor, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GDNF 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 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence
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MSPDKQMAVL PRRERNRQAA AANPENSRGK GRRGQRGKNR GCVLTAIHLN VTDLGLGYET KEELIFRYCS GSCDAAETTY
DKILKNLSRN RRLVSDKVGQ ACCRPIAFDD DLSFLDDNLV YHILRKHSAK RCGCI
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Activity
The ED50 determined by the proliferation of rat C6 cells is <0.1 ng/ml, corresponding to a specific activity of >$1.0x10^7$ units/mg.

Usage

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