

GDNF Human

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.

Catalog #: CYPs-312

For research use only.

Synonyms: ATF1, ATF2, HFB1-GDNF, GDNF.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Met-Ser-Pro-Asp-Lys.

Purity: Greater than 98.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

GDNF was lyophilized after dialysis against 10mM sodium citrate and 150mM NaCl.

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.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:

It is recommended to reconstitute the lyophilized Glial Derived Neurotrophic Factor in sterile 18M-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Introduction:

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.

Biological Activity:

The ED₅₀, calculated by the dose-dependant dopamin uptake in rat mesencephalic cultures was found to be 5-10 ng/ml, corresponding to a specific activity of 100,000-200,000 Units/mg.

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