
Human Glial Cell Derived Neurotrophic Factor (GDNF) Recombinant Protein

Catalog Number: 14-8506

Also Known As:

RUO: For Research Use Only

Product Information

Contents: Human Glial Cell Derived Neurotrophic Factor (GDNF) Recombinant Protein

REF Catalog Number: 14-8506

Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in a sterile environment

Source: *E. coli*-expressed amino acids Ser78 – Ile211 (Accession # CAG46721)


Molecular Mass: 30 kDa (homodimer)

Purity: Greater than 98%, as determined by SDS-PAGE


Endotoxin Level: Less than 0.01 ng/ug cytokine as determined by the LAL assay.

Bioactivity: The ED₅₀, calculated by dose-dependent induction of rat C6 cell proliferation, is 1ug/ml, corresponding to a specific activity of 1x10³ units/mg.

Formulation: Sterile liquid; 10 mM phosphate buffer, 150 mM NaCl, 1.0% BSA. 0.22 µm filtered.

 Temperature Limitation: Store at less than or equal to -70°C.

LOT Batch Code: Refer to Vial

 Use By: Refer to Vial

Description

Glial Cell derived Neurotrophic Factor (GDNF), a member of the TGFβ superfamily, is a neurotrophic factor that promotes the survival of various neuronal populations in both the central and peripheral nervous systems during their development. Neuronal subpopulations affected by GDNF include motor neurons, midbrain dopaminergic neurons and Purkinje cells. GDNF is conserved across mammalian species with human and rat orthologs sharing approximately 93% amino acid sequence identity. *E. coli*-produced recombinant human GDNF is a disulfide-linked, non-glycosylated homodimer composed of two 135 amino acid polypeptides.

Applications Reported

Recombinant human GDNF is biologically active.

Applications Tested

This recombinant human GDNF has been tested in bioassays by rat C6 cell proliferation. The ED₅₀, calculated by dose-dependent induction of rat C6 cell proliferation, is 1ug/ml, corresponding to a specific activity of 1x10³ units/mg.

References

Anitha, M. Gondha, C. Sutliff, R. Parsadani, A. Mwangi, S. Sitaraman, S. V. Srinivasan, S. GDNF rescues hyperglycemia-induced diabetic enteric neuropathy through activation of the PI3K/Akt pathway. *J. Clin. Invest.* 2006; 116: 344-356.

Boucher, T. J. Okuse, K. Bennett, D. L. H. Munson, J. B. Wood, J. N. McMahon, S. B. Potent analgesic effects of GDNF in neuropathic pain states. *Science* 2000; 290: 124-127.

Gash, D. M. Zhang, Z. Ovadia, A. Cass, W. A. Yi, A. Simmerman, L. Russell, D. Martin, D. Lapchak, P. A. Collins, F. Hoffer, B. J. Gorhardt, G. A. Functional recovery in parkinsonian monkeys treated with GDNF. *Nature* 1996; 380: 252-255.

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