Human GDNF Protein

Catalog Number: 10561-HNCH

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ATF1; ATF2; HFB1-GDNF; HSCR3

Protein Construction:

A DNA sequence encoding the mature form of human GDNF (P39905-2) (Arg 83-Ile 185) was expressed and purified, with additional two aa (Gly& Pro) at the N-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

1. Measured in a cell proliferation assay using SH- SY5Y human neuroblastoma cells. The ED50 for this effect is typically 3-20 ng/mL in the presence of Recombinant Human GFR alpha- 1/GDNF R alpha- 1 His Chimera. 2. Measured by its ability to bind biotinylated Human GFRa1-His in functional ELISA.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gly

Molecular Mass:

The recombinant human GDNF consists of 105 amino acids and predicts a molecular mass of 15.1 KDa. It migrates as approximately 18 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

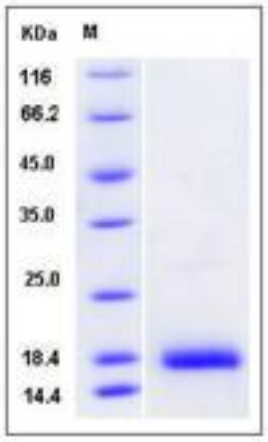
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Glial cell line-derived neurotrophic factor(GDNF) is an important member of the GDNF family of ligands(GFL). The GDNF family of ligands is comprised by four neurotrophic factors: glial cell line-derived neurotrophic factor (GDNF), neurturin (NRTN), artemin (ARTN), and persephin (PSPN). It has been found that GFLs play a role in a number of biological processes including cell survival, neurite outgrowth, cell differentiation and cell migration. As the founding member, GDNF plays a key role in the promotion of the survival of dopaminergic neurons. GDNF is a highly conserved neurotrophic factor. The recombinant form of this protein also promotes the survival and differentiation of dopaminergic neurons in culture, and was able to prevent apoptosis of motor neurons induced by axotomy. GDNF also regulates kidney development and spermatogenesis, and it affects alcohol consumption. It has been shown that GDNF results in two Parkinson's disease clinical trial and in a number of animal trials. It has been taken as a potent survival factor for central motoneurons.

References

1.Oppenheim RW, *et al*. (1995) Developing motor neurons rescued from programmed and axotomy-induced cell death by GDNF. Nature. 373 (6512): 344-6. 2.Tomac A, *et al*. (1995) Protection and repair of the nigrostriatal dopaminergic system by GDNF in vivo. Nature. 373 (6512): 335-9. 3.Schindelhauer D, *et al*. (1996) The gene coding for glial cell line derived neurotrophic factor (GDNF) maps to chromosome 5p12-p13.1. Genomics. 28 (3): 605-7.