

Rat GDNF Protein (His Tag)

Catalog Number: 80050-R07B



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

GDNF

Protein Construction:

A DNA sequence encoding the mature form of rat GDNF (Q07731-1) (Ser78-Ile211) was expressed, with a polyhistidine tag at the N-terminus.

Source: Rat

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % 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 10-50 ng/mL in the presence of Recombinant Rat GFR alpha1/GDNF R alpha1 His Chimera.

2. Immobilized rat His-GDNF (78-211) at 10 µg/ml (100 µl/well) can bind rat GFRA1-Fc (cat:80021-R02H). The EC50 of rat GFRA1-Fc (cat:80021-R02H) is 20-46.6 ng/ml.

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 °C

Predicted N terminal: His

Molecular Mass:

The recombinant rat GDNF consists of 150 amino acids and predicts a molecular mass of 17.1 KDa. It migrates as an approximately 20 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4

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

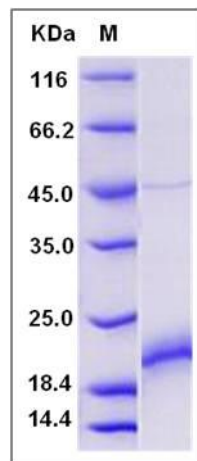
Usage Guide

Storage:

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

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Glial cell derived neurotrophic factor (GDNF) belongs to the GDNF family of ligands (GFL). It is a founding member of GFL. GFL comprises four neurotrophic factors: glial cell line-derived neurotrophic factor (GDNF), neurturin (NRTN), artemin (ARTN), and persephin (PSPN) and plays a role in a number of biological processes including cell survival, neurite outgrowth, cell differentiation and cell migration. GDNF is a highly conserved neurotrophic factor. It plays a key role in the promotion of the survival of dopaminergic neurons. The recombinant form of this protein 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. GDNF has been taken as a potent survival factor for central motoneurons and it can cause two Parkinson's disease clinical trial and a number of animal trials. GDNF may be a new target for drug addiction and alcoholism treatment.

References

1. Oppenheim RW. et al., 1995, Nature. 373 (6512): 344-6.
2. Tomac A. et al., 1995, Nature. 373 (6512): 335-9.
3. Schindelhauer D. et al., 1996, Genomics. 28 (3): 605-7.
4. Carnicella S. et al., 2008, Proc Natl Acad Sci. 105 (23): 8114-9.

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