

# Recombinant Rat GDNF Protein

Catalog No.: RP03234 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Rat	25453	Q07731-1

### Tags

N-His

### Synonyms

GDNF;ATF;ATF1;ATF2;HFB1-GDNF;HSCR3

## Product Information

Source	Purification
Baculovirus-Insect Cells	> 95% by SDS-PAGE.

### Endotoxin

&lt; 1 EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm filtered solution of 20mM Tris, 500mM NaCl, pH 7.4. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

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.

## Basic Information

### Description

Recombinant Rat GDNF Protein is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Ser78-Ile211) of Rat GDNF (Accession #NP\_062012.1) fused with an 6×His tag at the N-terminus.

### Bio-Activity

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 alpha-1/GDNF R alpha-1 His Chimera.

### Storage

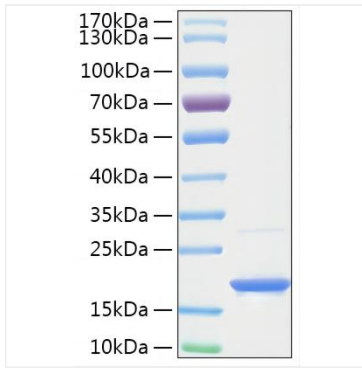
Store the lyophilized protein at -20°C to -80°C for 12 months.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Rat GDNF Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 20 kDa.