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## Product Data Sheet

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Product Name: GDNF Rat  
 Cat. No.: GP20299  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	ATF1; ATF2; HFB1-GDNF; GDNF.		
Amino Acid Sequence	SPDKQAALP RRENRRQAAA ASPENSRGKG RRGQRGKNRG CVLTAIHLNV TDLGLGYETK EELIFRYCSG SCESAETMYD KILKNLSRSR RLTSKVGQA CCRPVAFDDD LSFLDDNLVY HILRKHSKR CGCI		
Solubility	It is recommended to reconstitute the lyophilized Glial Derived Neurotrophic Factor in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	GDNF was lyophilized from a sterile solution containing 1xPBS, pH 7.4.		

### Introduction

GDNF promotes the survival and differentiation of 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 neurons and increases their high-affinity uptake.

### Biological Activity

Recombinant rat GDNF has full biological activity when compared to standards. The ED<sub>50</sub>, determined by a cell proliferation assay using rat C6 cells, is less than 0.2ng/ml corresponding to a specific activity of more than 5,000,000IU/mg.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Stability

Lyophilized Glial-derived Neurotrophic Factor although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution GDNF should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

Glial derived Neurotrophic Factor Rat Recombinant produced in E.Coli is a homodimer, non-glycosylated, polypeptide chain containing 2 x 134 amino acids and having a total molecular mass of 29.8 kDa.

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