

GDNF
Catalog # PVGS1561**Specification**

GDNF - Product Information

Primary Accession [P39905](#)
Species
Human

Sequence
Ser78-Ile211, expressed with an N-terminal Met

Purity
> 95% as analyzed by SDS-PAGE

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
ED₅₀ < 5.0 µg/ml, measured in a proliferation assay using C6 cells.

Expression System
E. coli

Formulation **Lyophilized after extensive dialysis against PBS.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH₂O or PBS up to 100 µg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

GDNF - Additional Information

Gene ID 2668

Other Names
Glial cell line-derived neurotrophic factor, hGDNF, Astrocyte-derived trophic factor, ATF, GDNF

Target Background
Glial cell line-derived neurotrophic factor (GDNF) is a neurotrophic factor belonging to the TGF-beta super family and is necessary for neuron survival and phenotypic maintenance in the central and peripheral nervous systems. G-DNF has the potential to support the differentiation and survival of many neuron subpopulations, especially dopaminergic neurons and motor neurons, as well as Purkinje cells and sympathetic neurons. Sertoli cells, type 1 astrocytes, Schwann cells,

neurons, pinealocytes and skeletal muscle cells are known to express GDNF in human. GDNF has been shown to interact with GFRA2 and GDNF family receptor alpha 1. Mutations in this gene may be associated with Hirschsprung's disease, Parkinson's disease and amyotrophic lateral sclerosis (ALS). The recombinant human G-DNF expressed in E.coli is a disulfide-linked homo-dimer, with an apparent molecular weight of 17 kDa.

GDNF - Protein Information

Name GDNF

Function

Neurotrophic factor that enhances survival and morphological differentiation of dopaminergic neurons and increases their high- affinity dopamine uptake (PubMed:8493557). Acts by binding to its coreceptor, GFRA1, leading to autophosphorylation and activation of the RET receptor (PubMed:10829012, PubMed:25242331, PubMed:31535977). Involved in the development of the neural crest (PubMed:15242795).

Cellular Location

Secreted

Tissue Location

In the brain, predominantly expressed in the striatum with highest levels in the caudate and lowest in the putamen Isoform 2 is absent from most tissues except for low levels in intestine and kidney. Highest expression of isoform 3 is found in pancreatic islets. Isoform 5 is expressed at very low levels in putamen, nucleus accumbens, prefrontal cortex, amygdala, hypothalamus and intestine. Isoform 3 is up-regulated in the middle temporal gyrus of Alzheimer disease patients while isoform 2 shows no change

GDNF - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GDNF - Images