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GDNF

Catalog # PVGS1346

Product Information

Primary Accession	P48540
Species	Mouse
Sequence	Met77-Ile211
Purity	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
Endotoxin Level	
Biological Activity	ED_{50}
Expression System	CHO
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 ddH_2O or PBS up to 100 □g/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.

Additional Information

Gene ID	14573
Other Names	Glial cell line-derived neurotrophic factor, mGDNF, Astrocyte-derived trophic factor, ATF, Gdnf
Target Background	Glial-Derived Neurotrophic Factor, also known as GDNF and ATF-1, is a neurotrophic factor belonging to the TGF-beta family. It is expressed in both central nervous system (CNS) and non-CNS tissues. GDNF signals through a receptor system composed of a RET and one of the four GFR alpha receptors. It promotes the survival and differentiation of dopaminergic neurons, and increases their high-affinity dopamine uptake. In a mouse Parkinson's Disease model, GDNF has been shown to improve bradykinesia, rigidity, and postural instability. GDNF has also been shown to regulate kidney development, spermatogenesis and affect alcohol consumption.

Protein Information

Name	Gdnf
Function	Neurotrophic factor that enhances survival and morphological differentiation of dopaminergic neurons and increases their high- affinity dopamine uptake. Acts by binding to its coreceptor, GFRA1, leading to autophosphorylation and activation of the RET receptor. Involved in the development of the neural crest.
Cellular Location	Secreted {ECO:0000250|UniProtKB:P39905}.
Tissue Location	Expressed in both the central nervous system (CNS) and in non-CNS tissues. Expressed in a highly dynamic pattern in the anterior neuroectoderm during the early stages of neurogenesis between 7.5 dpc and 10.5 dpc. Beginning at 10.5 dpc, expression begins in mesenchymal tissues of several organs including the digestive tract, kidney, testis, frontonasal mass, tooth primordium, tongue, mandible, whisker follicles, ear, eye, limb bud and in distinct regions of the brain. Also expressed in the heart, ileum, liver and muscle