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## DATASHEET

### Recombinant human GDNF protein

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#### Product overview

<b>Name</b>	Recombinant human GDNF protein
<b>Cat No</b>	HB5735
<b>Biological description</b>	<p>GDNF is widely expressed in many neuronal and non-neuronal tissues and is involved in multiple processes. It has been shown to enhance survival and morphological differentiation of dopaminergic neurons and increases their high-affinity dopamine uptake.</p> <p>GDNF promotes recovery of the injured nigrostriatal dopamine system and improves motor functions in rodent and nonhuman primate models of Parkinson's disease.</p> <p>GDNF, BDNF and other supplements are often used to differentiate hPSC-derived neural progenitor cells into neurons.</p>
<b>Species of origin</b>	human
<b>Alternative names</b>	Recombinant Human Glial-Derived Neurotrophic Factor, ATF1, ATF2, HFB1-GDNF, GDNF.
<b>Biological action</b>	Activator
<b>Purity</b>	>95%
<b>Description</b>	Neurotrophin which enhances differentiation and survival of dopaminergic neurons

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#### Biological Data

<b>Application notes</b>	ED <sub>50</sub> = < 0.1 ng/ml (determined by the proliferation of rat C6 cells), corresponding to a specific activity of >1.0x10 <sup>7</sup> units/mg.
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#### Solubility & Handling

<b>Storage instructions</b>	-20 °C
<b>Solubility overview</b>	To make a stock solution, reconstitute in sterile 18MΩcm water at a concentration > 100µg/ml, which can then be diluted to make a working solution
<b>Handling</b>	<ul style="list-style-type: none"><li>• Solutions should be made in sterile deionized water (not less than 100 µg/ml). This solution can then be further diluted with other aqueous solutions.</li><li>• Following reconstitution, solutions may be stored at 4 °C and are useable for around 2-7 days and for future use store at -18 °C.</li><li>• For long term storage, a carrier protein (0.1% HSA or BSA) should be added to stock solutions. Solutions should be aliquoted into tightly sealed vials for storage at -20 °C. Freeze-thaw cycles should be prevented.</li></ul>
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

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#### Chemical Data

<b>UniProt ID</b>	P39905
<b>Molecular Weight</b>	30
<b>Source</b>	E. Coli.
<b>Appearance</b>	White lyophilized powder (sterile filtered & freeze-dried)
<b>Formulation</b>	Lyophilized from a 0.2µm filtered solution in PBS (pH 7.4)

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## References

### **Glial cell line-derived neurotrophic factor (GDNF): a drug candidate for the treatment of Parkinson's disease**

Grondin R *et al* (1998) J Neurol 245(11 Suppl 3)

**PubMedID** [9808338](#)

### **Biology of GDNF and its receptors - Relevance for disorders of the central nervous system**

Ibanez CF *et al* (2017) Neurobiol Dis 97(Pt B)

**PubMedID** [26829643](#)

### **Glial cell line-derived neurotrophic factor (GDNF) induces neuritogenesis in the cochlear spiral ganglion via neural cell adhesion molecule (NCAM)**

Euteneuer S *et al* (2013) Mol Cell Neurosci 54

**PubMedID** [23262364](#)

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