

Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@m2stage.hellobio.com



DATASHEET

Recombinant human GDNF protein

Product overview

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| Name | Recombinant human GDNF protein |
| Cat No | HB5735 |
| Biological description | <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> |
| Species of origin | human |
| Alternative names | Recombinant Human Glial-Derived Neurotrophic Factor, ATF1, ATF2, HFB1-GDNF, GDNF. |
| Biological action | Activator |
| Purity | >95% |
| Description | Neurotrophin which enhances differentiation and survival of dopaminergic neurons |

Biological Data

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

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| Storage instructions | -20 °C |
| Solubility overview | 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 |
| Handling | <ul style="list-style-type: none">• 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.• 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.• 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. |
| Important | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use. |

Chemical Data

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

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](#)
