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DATASHEET

Recombinant human GDNF protein

Product overview

Name Recombinant human GDNF protein

Cat No HB5735

Biological description 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.

GDNF promotes recovery of the injured nigrostriatal dopamine system and improves motor functions in

rodent and nonhuman primate models of Parkinson's disease.

GDNF, BDNF and other supplements are often used to differentiate hPSC-derived neural progenitor

cells into neurons.

Species of origin human

Alternative names Recombinant Human Glial-Derived Neurotrophic Factor, ATF1, ATF2, HFB1-GDNF, GDNF.

Biological action Activator >95%

Description Neurotrophin which enhances differentiation and survival of dopaminergic neurons

Biological Data

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.

Solubility & Handling

Storage instructions Solubility overview

-20°C

To make a stock solution, reconstitute in sterile $18M\Omega$ cm water at a concentration > $100\mu g/ml$, which can then be diluted to make a working solution

Handling

- 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.

Shipping Conditions Important Stable for ambient temperature shipping. Follow storage instructions on receipt.

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

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