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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
Purity	>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 >1.0x10^7units/mg.

Solubility & Handling

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	• 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

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