Datasheet

Cat. No. P1153

Recombinant Human GDNF

Information

Gene ID	2668
Accession #	P39905
Alternate Names	ATF, ATF-1
Source	*Escherichia coli.*
M.Wt	Approximately 30.1 kDa, a homodimeric protein consisting of two 134 amino acid non-glycosylated polypeptide chains.
AA Sequence	SPDKQMAVLP RRERNRQAAA ANPENSRGKG RRGQRGKNRG CVLTAIHLNV TDLGLGYETK EELIFRYCSG SCDAAETTYD KILKNLSRNR RLVSDKVGQA CCRPIAFDDD LSFLDDNLVY HILRKHSAKR CGCI
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70 °C as supplied. - 1 month, 2 to 8 °C under sterile conditions after reconstitution. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 1 × PBS, pH 7.4, with 0.05 % Tween-20.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using rat C6 cells is less than 0.1 ng/ml, corresponding to a specific activity of > 5.0 × 107 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 μg	100 μg	500 μg
Recombinant Human GDNF	10 μg	100 μg	500 μg

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- 12 months from date of receipt, -20 to -70 °C as supplied.
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Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 0.1 EU/μg of rHuGDNF as determined by LAL method.

Description

Glial cell-derived neurotrophic factor is a neurotrophic factor that enhances survival and morphological differentiation of dopaminergic neurons and increases their high-affinity dopamine uptake. It is a founding member of the GDNF family of ligands (GFL) and has been shown to interact with GFRA2 and GDNF family receptor alpha. GDNF (monomer) contains seven conserved cysteine residues, one of which (Cys 101) is used for inter-chain disulfide bridging and the others are involved in intramolecular ring formation known as the cysteine knot configuration. Rat and human mature GDNF shows 93 % sequence identity and have species cross-reactivity.

Reference

1. Wood MD, Kim H, Bilbily A, et al. 2012. Muscle Nerve, 46: 122-4.

2. Stahl K, Mylonakou MN, Skare O, et al. 2011. Brain Res, 1378: 105-18.

3. Cornejo M, Nambi D, Walheim C, et al. 2010. Neurochem Res, 35: 1643-51.

4. Boado RJ, Zhang Y, Wang Y, et al. 2008. Biotechnol Bioeng, 100: 387-96.

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