

Active Recombinant Human GDNF, His-tagged

Cat. No. GDNF-22H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GDNF was purified from the endosperm tissue of barley grain (<i>Hordeum vulgare</i>).
Species	Human
Source	Barley Grain
Description	Glial cell line derived neurotrophic factor (GDNF) is a protein promoting the survival of various neuronal subpopulations at different stages of development. These include dopaminergic neurons in midbrain, GDNF stimulates their survival, differentiation and high-affinity dopamine uptake. The use of GDNF in the treatment of Parkinson's disease and spinal cord injuries has shown promising results. GDNF belongs to the TGF- β superfamily, it is a homodimeric protein with the familial cysteine-knot structure. Cells expressing GDNF include Sertoli cells, type 1 astrocytes, Schwann cells, neurons.
Form	Sterile filtered through a 0.2 μ m filter. Lyophilized from PBS, pH 7.2
Bio-activity	Recombinant human GDNF was determined by its dose dependent effect on proliferation of rat C6 cells and found to be fully comparable to a commercially available GDNF. Optimal concentration should be determined for specific applications and cell lines.
Molecular Mass	Recombinant human GDNF contains 134 amino acids and a 16 a.a. histidine-based tag for a total length of 150 a.a. and has a predicted molecular mass of 17.2 kDa

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	including his-tag. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 25 kDa in SDS-PAGE.
Endotoxin	Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg).
Purity	Greater than 95% by SDS-PAGE gel analysis.
Storage	The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Reconstitution	Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

GENE INFORMATION

Gene Name	GDNF glial cell derived neurotrophic factor [Homo sapiens]
Official Symbol	GDNF
Synonyms	GDNF; glial cell derived neurotrophic factor; glial cell line-derived neurotrophic factor; astrocyte derived trophic factor; ATF1; ATF2; glial cell line derived neurotrophic factor; glial derived neurotrophic factor; HFB1 GDNF; ATF; astrocyte-derived trophic factor; HSCR3; HFB1-GDNF;
Gene ID	2668
mRNA Refseq	NM_000514
Protein Refseq	NP_000505

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MIM	600837
UniProt ID	P39905
Chromosome Location	5p13.1-p12
Pathway	Axon guidance, organism-specific biosystem; Developmental Biology, organism-specific biosystem; NCAM signaling for neurite out-growth, organism-specific biosystem; NCAM1 interactions, organism-specific biosystem; Signaling events regulated by Ret tyrosine kinase, organism-specific biosystem;
Function	growth factor activity; protein homodimerization activity; receptor binding;

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