

Active Recombinant Human GDNF, His-tagged

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

SPECIFICATION

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| 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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