

# Recombinant human glial cell line derived neurotrophic factor (GDNF). Animal and Endotoxin free

CATALOGUE NUMBER: AMS-162      AVAILABLE SIZES: 10µg, 50µg, 100µg, 1000µg

## 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,

## SOURCE

Produced in the endosperm tissue of barley grain (*Hordeum vulgare*).

## FORMULATION

Sterile filtered through a 0.2 µm filter. Lyophilized from PBS, pH 7.2

## PURITY

Greater than 95% by SDS-PAGE gel analysis.

## RECONSTITUTION

Note: 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).

## STABILITY

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.

## BIOLOGICAL ACTIVITY

Each batch of growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of 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.

## ENDOTOXIN LEVEL

Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg).

## MAT assay

Purified product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction. Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland

## MOLECULAR WEIGHT

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 including his-tag. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 25 kDa in SDS-PAGE.

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