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Human GDNF Recombinant Protein

10 µg

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For Research Use Only. Not for Use in Diagnostic Procedures.**MW (kDa):**
30**UniProt ID:**
#P39905**Entrez-Gene Id:**
2668

Background

Glial cell-derived neurotrophic factor (GDNF) plays an important role in the development and maintenance of the central and peripheral nervous system, renal morphogenesis, and spermatogenesis (1). This glycosylated, disulfide-bonded homodimer is a member of the TGF- β superfamily and plays an important role in neuronal survival (2). GDNF and the related GDNF family of ligands (GFLs) neurturin, persephin, and artemin bind to the GDNF family receptor α (GFR α) proteins that signal through the Ret receptor tyrosine kinase (3,4). The effect that GDNF has on degenerating dopamine neurons makes it an important growth factor when studying Parkinson's disease (PD) (5). GDNF has also been identified as a therapeutic target for amyotrophic lateral sclerosis (ALS), is a suggested biomarker for Alzheimer's Disease (AD), and has been associated with cancer progression (6-9).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg hGDNF.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human GDNF was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hGDNF was determined in a C6 cell proliferation assay. The ED₅₀ of each lot is less than or equal to 3 µg/ml.

Background References

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2. Choi-Lundberg, D.L. et al. (1997) *Science* 275, 838-41.
3. Sariola, H. and Saarma, M. (2003) *J Cell Sci* 116, 3855-62.
4. Tallini, G. and Asa, S.L. (2001) *Adv Anat Pathol* 8, 345-54.
5. Konishi, Y. et al. (2014) *J Neurosci* 34, 13127-38.
6. Cintrón-Colón, A.F. et al. (2020) *Cell Tissue Res* 382, 47-56.
7. Sharif, M. et al. (2021) *Neural Sci* 42, 2865-2872.
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