

Store at
-20°C

Human GDNF Recombinant Protein



#16187

10 µg

Support: +1-978-867-2388 (U.S.)
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orders@cellsignal.comEntrez-Gene ID #2668
UniProt ID #P39905

New 11/20

For Research Use Only. Not For Use In Diagnostic Procedures.

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).

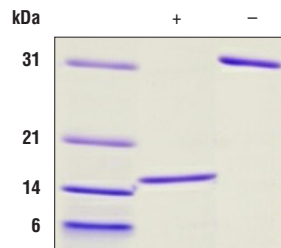
Molecular Weight: 30 kDa

Endotoxin: Endotoxin levels are \leq 1 EU / 1 µg hGDNF.

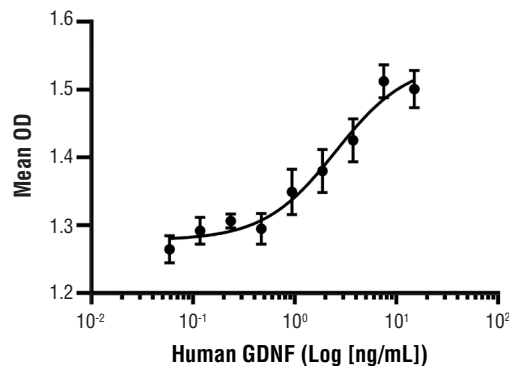
Purity: \geq 95% purity was determined by SDS-PAGE.

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 ED_{50} of each lot is \leq 3 µg/ml.



The purity of Human GDNF Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant hGDNF and staining with Coomassie Blue. hGDNF is a disulfide-linked homodimer with a predicted total molecular weight (MW) of 30.4 kDa with each subunit equaling 15.2 kDa.



Serial dilutions of Human GDNF Recombinant Protein were added to C6 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED_{50} .

Storage: Human GDNF Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

Background References:

- (1) Fielder, G.C. et al. (2018) *Neoplasia* 20, 99-117.
- (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.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.