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Recombinant human GDNF protein (Qk051-CTG)

Type: Cell Therapy Grade

Available for purchase: Unit Size (µg): 25, 50, 100, 500, 1000

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Product Information

Glial cell line-derived neurotrophic factor (GDNF) is a member of neurotrophin family, it plays a crucial role in the development, growth, and survival of neurons in particular midbrain dopaminergic neurons. GNDF is used to maintain neurons and cortical organoids and to differentiate dopaminergic neurons from human pluripotent stem cell-derived neural progenitors for neural regenerative therapy applications.

Recombinant human GDNF bioactive 30 kDa homodimer. This cell therapy grade protein is animal origin-free (AOF), carrier protein-free, and tag-free to ensure its purity with exceptional lot-to-lot consistency.

Qkine cell therapy grade high purity animal origin-free proteins are manufactured as GMP grade equivalents in an ISO 9001:2015-certified facility, under ISO 20399:2022 standards with GMP compliance, defined quality criteria and documentation.

This product is available to order now and will be in stock soon, please contact us for the estimated lead time customerservice@qkine.com

Alternative protein names

Astrocyte-derived trophic factor, ATF, ATF1, ATF2; glial cell line derived neurotrophic factor; glial derived neurotrophic factor; HFB1-GDNF; HSCR3, Qk51, Qk051 GMP, GMP GDNF

Molecular weight

30.4 kDa (dimer)

Protein Uniprot number

High purity GDNF (Uniprot: P39905)

Species reactivity

- human
- species similarity:
- mouse – 93%
- rat – 93%
- bovine – 92%
- porcine – 94%

Product Information

- Certified animal origin-free (AOF)
- Cell and gene therapy grade
- Manufactured in our ISO 9001:2015 facility in Cambridge, UK
- Lot-to-lot consistency in bioactivity
- Full traceability and documentation
- Carrier protein-free, tag free
- Expressed in *E. coli*
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

- Resuspend in sterile-filtered water at >50 µg/ml

Featured applications

- Neurogenesis and neural differentiation
- Neural stem cell (NSC) therapy
- Regenerative stem cell therapy

Further quality assays

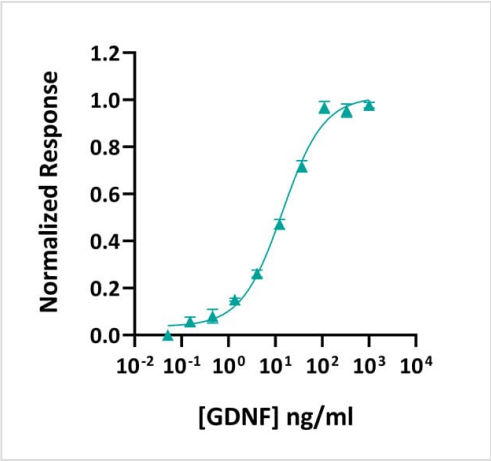
- Mass spectrometry: single species with expected mass
- Purity >98%, by SDS-PAGE quantitative densitometry
- Recovery from stock vial: >95%
- Sterility tested and mycoplasma negative

- Endotoxin: <0.05 EU/μg protein
- Residual host cell protein <10 ng/μg
- Residual host cell DNA <10 ng/μg
- N-terminal sequence analysis

Scientific Information

Bioactivity

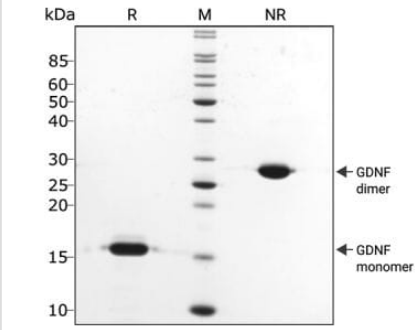
GDNF activity was determined using a SH-SY5Y cell proliferation assay. Cells were incubated with different concentrations of GDNF in the presence of retinoic acid and recombinant GFR α1 for 3 days before viable cell measurement using the CellTiter-Glo Cell Proliferation Assay (Promega). EC50 = 14.3 ng/ml (0.47 nM). Data from Qk051-CTG lot #204788.



The specific activity of recombinant cell therapy grade GDNF is >0.5 x 10^6 IU/mg, which is calibrated against the human GDNF standard (NIBSC code: 09/266).

Purity

GDNF migrates as a single band at 30 kDa in non-reducing (NR) conditions and 15 kDa upon reduction (R). No contaminating protein bands are visible. Purified recombinant protein (3 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptothanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk051 lot #104372.



Original product page: https://qkine.com/product/recombinant-human-gdnf-protein-qk051-ctg/

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