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Recombinant human GDNF protein (Qk051)



Type: Stem cells

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 and GDNF family of ligands (GFL). GDNF 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. GDNF also facilitates the differentiation of neural progenitors to astrocytes.

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

Qkine GDNF is also available as cell therapy grade with extended quality testing and documentation - Qk051-CTG

Alternative protein names

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

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

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

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

Featured applications

- Differentiation of midbrain dopaminergic neurons

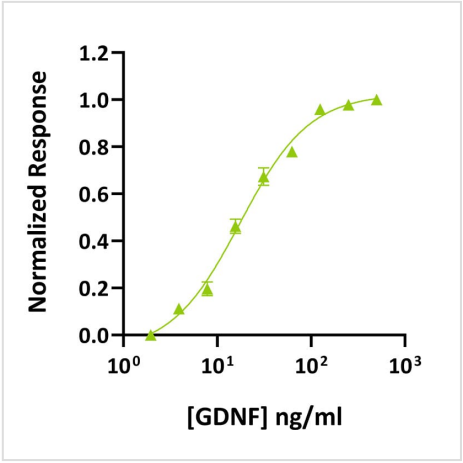
Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

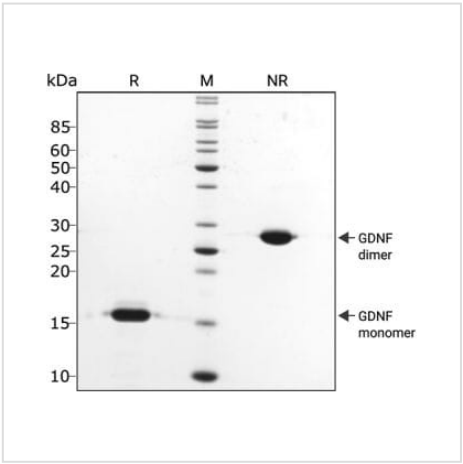
Bioactivity

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 an MTS assay. Data are n=2. EC50 = 18 ng/ml. Data from Qk051 batch #104372.



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 batch #104372.



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

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