

## 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. GDNF 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

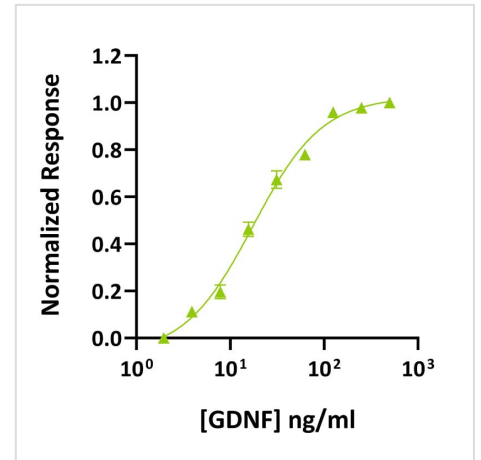
### **Further quality assays**

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

## Scientific Information

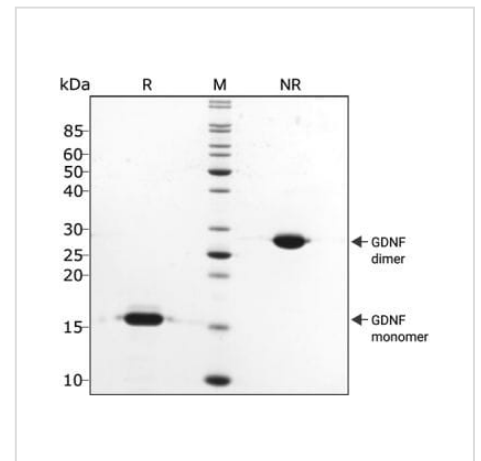
### Bioactivity

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  $\alpha$ 1 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  $\mu$ g) was resolved using 15% w/v SDS-PAGE in reduced (+ $\beta$ -mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk051 batch #104372.



**Original product page:** <https://ryan.calliope-alpha.ts.net/product/recombinant-human-gdnf-protein-qk051/>

**PDF generated:** 12 May 2026

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