

## Recombinant human NRG-1 protein (Qk045)



**Type:** Stem cells

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

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### Product Information

Human NRG-1 protein (neuregulin 1) is frequently used in the maintenance of [human pluripotent stem cells](#). In addition to its widespread use in stem cell culture media, NRG-1 (also known as Heregulin-β1, HRG-1) has essential roles in vivo including in nervous system, cardiac, and mammary gland development; cancer biology and neurological disorders.

Qkine NRG-1 is the 7.5 kDa highly pure, bioactive domain of human NRG-1, comprised of the β isoform of the EGF-like domain of NRG-1 (HRG1-B1). This NRG-1 protein monomer is [animal origin-free](#) (AOF) and carrier-protein free (CF).

**This protein is also available as GMP compliant [Cell Therapy Grade](#), to enquire email [ryan.weber@matriq.com](mailto:ryan.weber@matriq.com).**

#### Alternative protein names

Neuregulin1 (NRG1-β1), Neu differentiation factor (rat), Heregulin, HRG, HRG1-β1, Breast cancer cell differentiation factor p45, ARIA (Acetylcholine, Receptor Inducing Activity), glial growth factor, NRG 1, NRG1, Qk45

#### Molecular weight

7.5 kDa

#### Protein Uniprot number

High purity human NRG-1 protein (Uniprot: Q02297)

#### Species reactivity

- human
- species similarity:
- mouse - 98%
- rat - 83%
- bovine - 100%
- porcine - 100%

### **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**

- Maintenance of pluripotency in iPSC

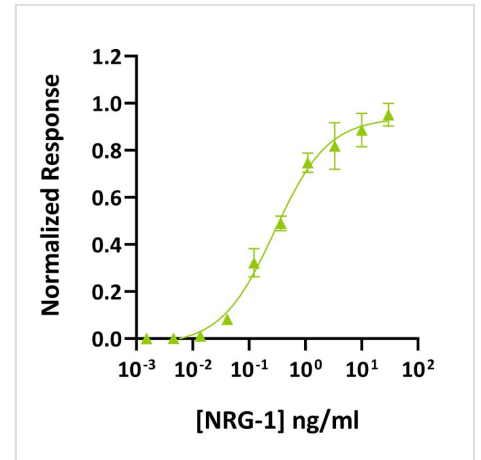
### **Further quality assays**

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

## Scientific Information

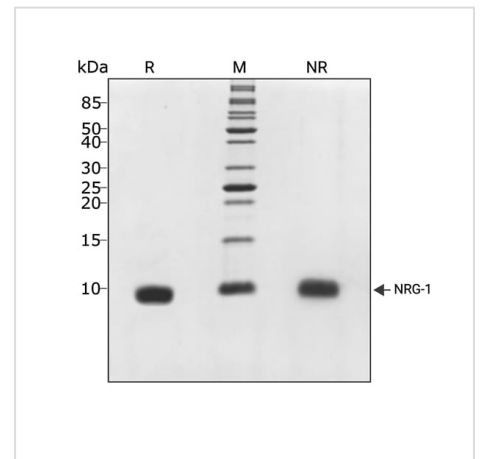
### Bioactivity

NRG-1 activity was determined using the Promega serum response element luciferase reporter assay in transfected MCF-7 cells. Cells were treated in triplicate with a serial dilution of NRG-1 for 4 hours. Firefly luciferase activity was measured and normalized to the control Renilla luciferase activity. EC50 = 37.9 pM (0.28 ng/ml). Data from Qk045 lot #104317.



### Purity

NRG-1 migrates as a single band at 7.5 kDa in non-reducing (NR) conditions and upon reduction (R). No contaminating protein bands are visible. Purified recombinant protein (3 µg) was resolved using 18% w/v SDS-PAGE in reduced (+β-mercaptoethanol, R) and non-reduced (NR) conditions and stained with Coomassie Brilliant Blue R250. Data from Qk045 batch #104317.



**Original product page:** <https://ryan.calliope-alpha.ts.net/product/recombinant-human-nrg1-protein-qk045/>

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