

# Recombinant Human Pro-neuregulin-1/NRG1 (Beta1) Protein

Catalog No.: RP01825 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	3084	Q02297-6 [Beta1]

### Tags

No-Tag

### Synonyms

GGF; HGL; HRG; NDF; ARIA; GGF2; HRG1; HRGA; SMDF; MST131; MSTP131; NRG1-IT2; Pro-neuregulin-1; NRG1 [Beta1]

## Product Information

Source	Purification
<i>E. coli</i>	> 92% by SDS-PAGE.

Calculated MW	Observed MW
8.06 kDa	10-15 kDa

### Endotoxin

< 1EU/μg

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

## Contact

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## Background

neuregulin-1 (heregulin-1 [NRG1]) is a member of neuregulin family, which is comprised of four genes that encode a large number of secreted or membrane-bound isoforms. All family members share an EGF-like domain that interacts with the ErbB family of tyrosine kinase receptors. NRG1 isoforms can be classified into type I, type II and type III isoforms. NRG1 directs ligand for ERBB3 and ERBB4 tyrosine kinase receptors, concomitantly recruits ERBB1 and ERBB2 coreceptors, resulting in ligand-stimulated tyrosine phosphorylation and activation of the ERBB receptors. NRG proteins show distinct spatial and temporal expression patterns and play important roles during development of both the nervous system and the heart.

## Basic Information

### Description

Recombinant Human Pro-neuregulin-1/NRG1 [Beta1] Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Thr 176-Lys 246) of human Pro-neuregulin-1/NRG1 [Beta1] (Accession #NP\_039250.2) fused with no additional

### Bio-Activity

Measured in a serum-free cell proliferation assay using MCF-7 human breast cancer cells. The ED<sub>50</sub> for this effect is typically 0.62-2.48 ng/mL, corresponding to a specific activity of 4.03×10<sup>5</sup>~1.61×10<sup>6</sup> units/mg.

### Storage

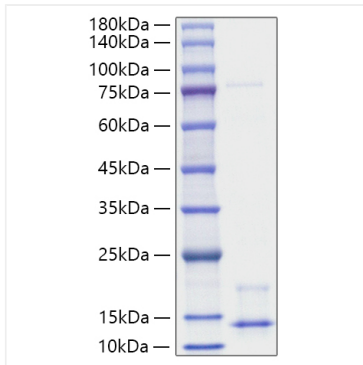
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

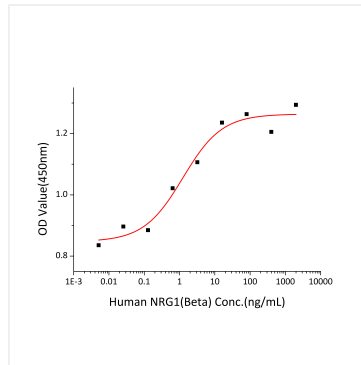
Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human Pro-neuregulin-1/NGR1 (Beta1) Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 10-15 kDa.



Recombinant Human Pro-neuregulin-1/NGR1 (Beta1) stimulates serum-free cell proliferation assay using MCF-7 human breast cancer cells. The  $ED_{50}$  for this effect is typically 0.62-2.48 ng/mL, corresponding to a specific activity of  $4.03 \times 10^5 \sim 1.61 \times 10^6$  units/mg.