

## Heregulin- $\beta$ 1, Human, Recombinant

Cat. No. : PCK373

### General Information

<b>Synonyms</b>	Pro-neuregulin-1, Neuregulin-1 beta 1, NRG1-beta 1, HRG1-beta 1, EGF, NRG1, GGF, HGL, HRGA, NDF, SMDF, Heregulin- $\beta$ 1
<b>Species</b>	Human
<b>Expression host</b>	E.coli
<b>Sequence</b>	A DNA sequence encoding Human Heregulin Beta 1 Protein (#Q02297-6) (Ser177-Glu241) was expressed with polyhistidine tag at the C-terminus.
<b>Accession</b>	Q02297-6
<b>Tag</b>	His Tag (C-term)
<b>Mol mass</b>	8.42 kDa
<b>Expiration date</b>	12 months
<b>Bio activity</b>	Measure by its ability to induce MCF-7 cells proliferation. The ED for this effect is < 10 ng/mL.

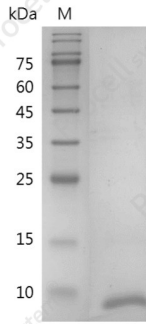
### Product feature

<b>Purity</b>	>95% as determined by SDS-PAGE. Ni-NTA chromatography.
<b>Endotoxin (EU/<math>\mu</math>g)</b>	< 0.1
<b>Storage</b>	Lyophilized protein should be stored at -5~-20°C for 1 year. Upon reconstitution, store at 2-8°C for up to 1 week. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10% FBS, 5% HSA or 5% trehalose solution), protein aliquots should be stored at -5~-20°C or -80°C for 3-6 months.
<b>Shipping</b>	Ice bag
<b>Formulation</b>	The protein was lyophilized from a 0.2 $\mu$ m filtered solution containing 1 $\times$ PBS, pH8.0.
<b>Reconstitution</b>	It is recommended to reconstitute the lyophilized protein in sterile water to a concentration not less than 100 $\mu$ g/mL. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.

### Background

Neuregulin-1 (NRG-1, also called heuregulin1 or neu differentiation factor) is a glycoprotein that belongs to the neuregulins family. Structurally, Neuregulin-1 harbors tissue-specific N terminal sequence, followed by immunoglobulin-like (Ig-like) domains, an EGF-like domain, a transmembrane domain, and a cytoplasmic domain. NRG1 has multiple isoforms produced by alternative splicing. Heregulin- $\beta$ 1 (HRG- $\beta$ 1) is one of the isoforms, has been reported to engage the development and survival of cardiomyocytes derived from embryonic stem (ES) cells via activating MAPK-ERK and PI3K-AKT pathways. Moreover, HRG- $\beta$ 1 plays a central role in promoting the proliferation of neuronal progenitors from embryonic neural stem cells.

SDS-PAGE



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