

## Recombinant Human Heregulin beta 1

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### Product Description

Neuregulin/Heregulin is a family of structurally related polypeptide growth factors derived from alternatively spliced genes (NRG1, NRG2, NRG3 and NRG4). To date, there are over 14 soluble and transmembrane proteins derived from the NRG1 gene. Proteolytic processing of the extracellular domain of the transmembrane NRG1 isoforms releases soluble growth factors. HRG1-β1 contains an Ig domain and an EGF-like domain; the latter is necessary for direct binding to receptor tyrosine kinases erb3 and erb4. This binding induces erb3 and erb4 heterodimerization with erb2, stimulating intrinsic kinase activity that leads to tyrosine phosphorylation. Although HRG1-β1's biological effects are still unclear, it has been found to promote motility and invasiveness of breast cancer cells, which may also involve up-regulation of expression and function of the autocrine motility-promoting factor (AMF). Recombinant Human Heregulinβ-1 (HRG1-B1) is a 7.5 kDa polypeptide consisting of only the EGF domain of heregulinβ-1 (65 amino acid residues).

### Typical Specifications

<b>Species</b>	Human
<b>Expression</b>	E. coli Cell Expressed
<b>Activity</b>	Typically ≤0.5 ng/mL ED <sub>50</sub>
<b>Purity</b>	≥98%
<b>Endotoxin</b>	<1.0 EU/μg
<b>Molecular Mass</b>	7.5 kDa
<b>Country of Origin</b>	USA

### Purity Confirmation

This was determined by SDS-PAGE gel and HPLC analysis.

### Activity Assay

Determined by the dose-dependent stimulation of the proliferation of human MCF-7 cells.

### AA Sequence

SHLVKCAEKE    KTFCVNGGEC    FMVKDLSNPS  
RYLCKCPNEF    TGDRQCNYVM    ASFYKHLGIE  
FMEAE

### Reconstitution Buffer

Centrifuge the vial prior to opening.  
Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex.

### Storage

For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% HSA) and store in working aliquots at -20°C to -80°C.

#### Limited Use and Restrictions

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