

## Overview

<b>Synonyms</b>	Neuregulin1 (NRG1- <sup>2</sup> 1)
<b>Description</b>	<p><b>Heregulin1-Beta1(HRG1-Beta1)</b> is one of the isoforms encoded by Neuregulin (NRG) genes. NRGs are synthesized as large transmembrane precursor proteins, and the NRG family has 4 members and 26 isoforms. These isoforms provide large diversities, including different tissue distribution, variable potencies, and different biological functions. HRG1-<sup>2</sup> 1 belongs to Type I HRG1, and is expressed in neural tissue, respiratory epithelia, and heart. <i>In vivo</i>, HRG1 binds and activates both ErbB3 and ErbB4, the transmembrane receptor tyrosine kinase, and is involved in the proliferation, differentiation, and survival of cells. Aberrantly produced HRG1 could be used in the constitute activation of the ErbB receptors; therefore, the upregulation of HRG1 contributes to the development of tumors, including breast cancer.</p> <p>Recombinant <b>human Heregulin1-Beta1(HRG1-Beta1)</b> produced in <i>E. coli</i> is a single non-glycosylated polypeptide chain containing 66 amino acids. A fully biologically active molecule, rh HRG1-Beta1 has a molecular mass of 7.6 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.</p>
<b>Accession No</b>	Q02297
<b>Species</b>	Human
<b>Source</b>	<i>E. coli</i>
<b>Biological Activity</b>	ED <sub>50</sub> < 1 ng/mL, measured by a cell proliferation assay using MCF-7 cells, corresponding to a specific activity of > 1× 10 <sup>6</sup> units/mg.
<b>Sequence</b>	MSHLVKCAEK EKTFCVNGGE CFMVKDLSNP SRYLCKCPNE FTGDRCQNYV MASFYKHLGI EFMEAE

## Properties

<b>Measured Molecular Weight</b>	7.6 kDa, observed by reducing SDS-PAGE.
<b>Purity</b>	> 95% by SDS-PAGE analysis.
<b>Formulation</b>	Lyophilized after extensive dialysis against PBS.
<b>Reconstitution</b>	Reconstituted in ddH <sub>2</sub> O at 100 µg/mL.
<b>Endotoxin Level</b>	< 0.2 EU/µg, determined by LAL method.
<b>Storage</b>	Lyophilized recombinant <b>human Heregulin1-Beta1(HRG1-Beta1)</b> remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhHRG1-Beta1 should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.
<b>Note</b>	For research use only

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