

Rev03  
Update: Dec,14,2021

**DATASHEET**

# HRG1- $\beta$ 1, Human

Cat. No.: Z03051

## Product Introduction

<b>Species</b>	Human
<b>Protein Construction</b>	Expressed with an N-terminal Met. <b>HRG1-<math>\beta</math>1 (Ser177-Glu241)</b> Accession # Q02297-6
<b>Purity</b>	> 95% as analyzed by SDS-PAGE
<b>Endotoxin Level</b>	< 0.2 EU/ $\mu$ g of protein by gel clotting method
<b>Biological Activity</b>	ED <sub>50</sub> < 1.0 ng/ml, measured by a cell proliferation assay using MCF-7 cells, corresponding to a specific activity of > 1.0 $\times$ 10 <sup>6</sup> units/mg.
<b>Expression System</b>	E. coli
<b>Apparent Molecular Weight</b>	~7.6 kDa, on SDS-PAGE under reducing conditions.
<b>Formulation</b>	Lyophilized after extensive dialysis against PBS.
<b>Reconstitution</b>	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH <sub>2</sub> O up to 100 $\mu$ g/ml.
<b>Storage &amp; Stability</b>	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

## Background

**Target Background :** Heregulin1-Beta1(HRG1-Beta1) 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- $\beta$ 1 belongs to Type I HRG1, and is expressed in neural tissue, respiratory epithelia, and heart. In vivo, 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.

**Synonyms :** Neuregulin1; NRG1- $\beta$ 1

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