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## Product Data Sheet

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Product Name: NRG1 Human  
 Cat. No.: GP20771  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Neuregulin-1; NRG1; GGF; HGL; HRGA; NDF; SMDF; HRG; ARIA; GGF2; HRG1.		
Amino Acid Sequence	SHLVKCAEKEKTFVNGGECFMVKDLSNPSRYLCKCPNEFTGDRCQNYVMASFYKAEELYQ.		
Solubility	It is recommended to reconstitute the lyophilized NRG1 in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		

Formulation Lyophilized from a 0.2μm filtered solution in PBS, pH 7.4.

### Introduction

Neuregulin is a signaling protein for ErbB2/ErbB4 receptor heterodimers on the cardiac muscle cells, playing an important role in heart structure and function through inducing ErbB2/ErbB4 receptor phosphorylation and cardiomyocyte differentiation. Research on molecular level discovered that neuregulin recombinant could make disturbed myocardial cell structure into order and strengthen the connection between myocardial cells by intercalated discs re-organization. Pharmacodynamic experiments in animals showed that neuregulin (NRG1) recombinant can reduce the degree of damage on myocardial cells caused by ischemia, hypoxia and viral infection.

### Biological Activity

The ED<sub>50</sub> as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 50ng/ml, corresponding to a specific activity of > 2.0 × 10<sup>4</sup> IU/mg.

### Stability

Lyophilized NRG1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Heregulin should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Background

Recombinant Human Neuregulin-1 beta 2 produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 61 amino acids and having a total molecular mass of 7.0kDa. NRG-1 is purified by proprietary chromatographic techniques.

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