



Recombinant Human NRG-1 (EGF-like domain) Beta 1 (rhNRG-1b1)

Catalog #107-10b1

Product Description

Neuregulin-1 (NRG-1) is a member of the epidermal growth factor (EGF) family that regulates cell proliferation, differentiation, and survival through activation of ErbB receptor tyrosine kinases. The $\beta 1$ isoform of the EGF-like domain specifically binds to ErbB3 and ErbB4 receptors, promoting heterodimerization with ErbB2 and initiating downstream signaling pathways including PI3K/Akt and MAPK.

NRG-1 $\beta 1$ plays a critical role in cardiac development and maintenance by stimulating ErbB2/ErbB4 signaling in cardiomyocytes. It has been shown to induce ErbB receptor phosphorylation, promote cardiomyocyte survival, improve sarcomere organization, and facilitate intercalated disc remodeling. In addition to its cardiovascular functions, NRG-1 $\beta 1$ is widely used in studies of neural development, Schwann cell biology, stem cell differentiation, and tissue regeneration.

Specifications

Synonyms:	NRG1- $\beta 1$, HRG $\beta 1$, Heregulin $\beta 1$, ARIA, HGL, HRG, HRGA, MST131, NDF
AA Sequence:	SHLVKCAEKE KTFCVNGGEC FMVKDLSNPS RYLCKCPNEF TGDRCQNYVM ASFYKHLGIE FMEAE
Source:	<i>E. coli</i>
Molecular Weight:	7.5 kDa

Quality Control

Purity	> 95%
Physical Appearance:	White lyophilized powder.
Endotoxin:	<0.1 ng/ μ g of protein (<1 EU/ μ g)

Formulation

Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM Tris-HCl pH7.5 and 300 mM NaCl with dextran as protectant.

Reconstitution

Reconstitute in sterile distilled water or 1x PBS containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL.

Rev. 0

Shipping and Storage

Gel pack. Upon receipt, store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.

Usage

rhNRG-1b1 is for research use only. It is not approved for human or animal use, or for application in clinical or *in vitro* diagnostic procedures.