



Synonym

NRG1 Beta 1,HRG1 beta 1,Neuregulin-1 beta 1,Neuregulin1 beta 1,NRG1,ARIA,GGF,HGL,HRGA,NDF,SMDF

Source

Human NRG1 Beta 1 Protein, His Tag, premium grade(NR1-H5246) is expressed from human 293 cells (HEK293). It contains AA Ser 177 - Glu 241 (Accession # [Q02297-6](#)).

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

Poly-his NRG1 Beta 1(Ser 177 - Glu 241)
Q02297-6

This protein carries a polyhistidine tag at the N-terminus.

The protein has a calculated MW of 9.5 kDa. The protein migrates as 9 kDa under reducing (R) condition, and 9 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE).

Endotoxin

Less than 0.1 EU per µg by the LAL method.

Host Cell DNA

<0.02 ng/µg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM NaAC, 150 mM NaCl, pH5.0 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

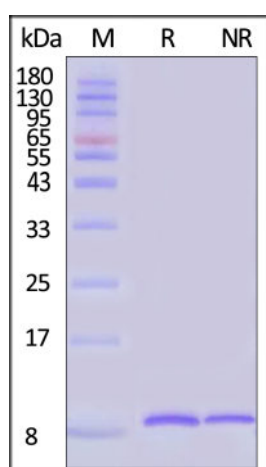
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human NRG1 Beta 1 Protein, His Tag, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with

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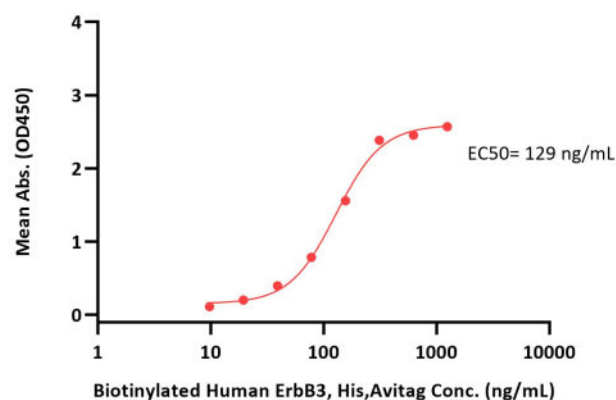




Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA

Human NRG1 Beta 1 Protein, His Tag, premium grade ELISA
0.5 µg of Human NRG1 Beta 1 Protein, His Tag, premium grade per well



Immobilized Human NRG1 Beta 1 Protein, His Tag, premium grade (Cat. No. NR1-H5246) at 5 µg/mL (100 µL/well) can bind Biotinylated Human ErbB3, His,Avitag (Cat. No. ER3-H82E6) with a linear range of 10-313 ng/mL (QC tested).

Background

NRG1 is one of four proteins in the neuregulin family that act on the EGFR family of receptors. It is known that an extraordinary variety of different isoforms are produced from the NRG1 gene by alternative splicing. These isoforms include heregulins (HRGs), glial growth factors (GGFs) and sensory and motor neuron-derived factor (SMDF). They are tissue-specific and differ significantly in their structure. The HRG isoforms all contain immunoglobulin (Ig) and epidermal growth factor-like (EGF-like) domains. GGF and GGF2 isoforms contain a kringle-like sequence plus Ig and EGF-like domains; and the SMDF isoform shares only the EGF-like domain with other isoforms. The receptors for all NRG1 isoforms are the ERBB family of tyrosine kinase transmembrane receptors. Through their displayed interaction with ERBB receptors, NRG1 isoforms induce the growth and differentiation of epithelial, neuronal, glial, and other types of cells.

Clinical and Translational Updates

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