

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, Fc Tag, premium grade(NR1-H5268) is expressed from human 293 cells (HEK293). It contains AA Ser 2 - Lys 246 (Accession # [Q02297-6](#)).

Predicted N-terminus: Pro

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

Fc(Pro 100 - Lys 330) P01857	NRG1 Beta 1(Ser 2 - Lys 246) Q02297-6
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This protein carries a human IgG1 Fc tag at the N-terminus

The protein has a calculated MW of 53.2 kDa. The protein migrates as 65-80 kDa and 90 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.1 EU per µg by the LAL method.

Sterility

The sterility testing was performed by membrane filtration method.

Mycoplasma

Negative.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 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

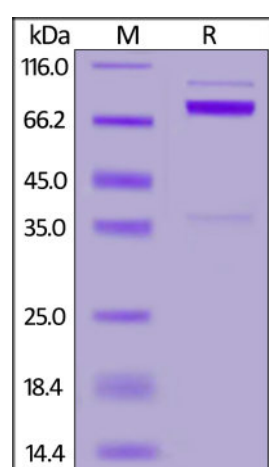
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

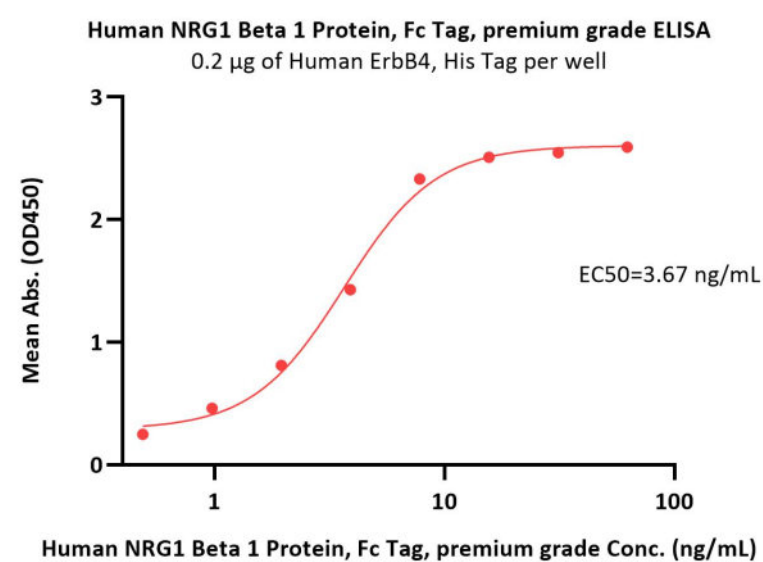
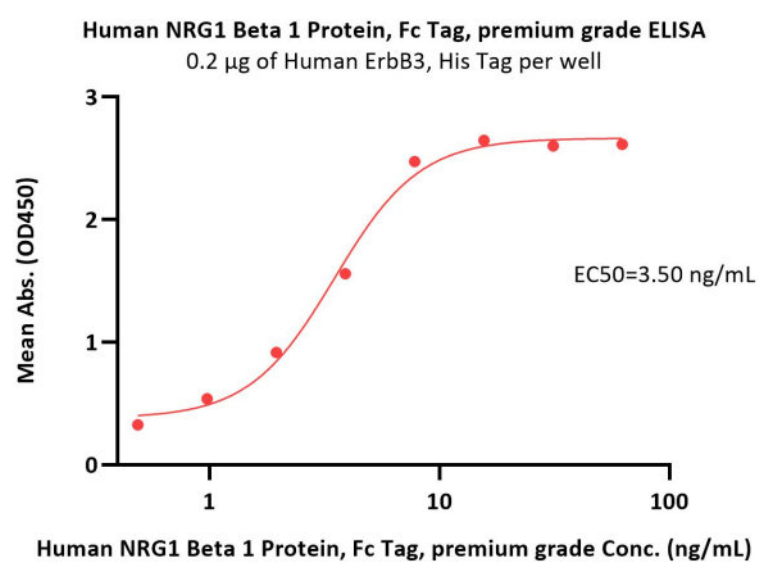
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human NRG1 Beta 1, Fc Tag, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity-ELISA



Immobilized Human ErbB3, His Tag (Cat. No. ER3-H5223) at 2 µg/mL (100 µL/well) can bind Human NRG1 Beta 1, Fc Tag, premium grade (Cat. No. NR1-H5268) with a linear range of 0.5-8 ng/mL (QC tested).

Immobilized Human ErbB4, His Tag (Cat. No. ER4-H5221) at 2 µg/mL (100 µL/well) can bind Human NRG1 Beta 1, Fc Tag, premium grade (Cat. No. NR1-H5268) with a linear range of 0.5-8 ng/mL (Routinely 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

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.