

Human NRG1-beta 1 Protein (ECD, Fc Tag)

Catalog Number: 11609-H04H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

NRG1, GGF, HGL, HRGA, NDF, SMDF

Protein Construction:

A DNA sequence encoding the N-terminal fragment (Ser 2-Lys 246) of human NRG1 isoform beta1 (Q02297-6) was expressed, fused with the Fc region of mouse IgG1 at the N-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 88 % as determined by SDS-PAGE

Bio-Activity

1. Measured by its ability to bind with human ErbB4-His (Cat:10363-H08H) in a functional ELISA.
2. Measured by its ability to bind with human ErbB3-His (Cat:10201-H08H) in a functional ELISA.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Asp

Molecular Mass:

The recombinant human NRG1/mFc is a disulfide-linked homodimer. The reduced monomer comprises 481 amino acids and has a predicted molecular mass of 53.4 kDa. The apparent molecular mass of the monomer is approximately 67 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

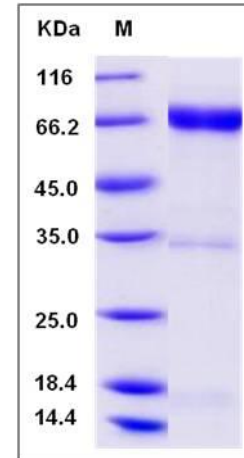
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Neuregulin 1 or NRG1 is one of four proteins in the neuregulin family that act on the EGFR family of receptors. This growth factor was originally identified as a 44-kD glycoprotein that interacts with the NEU / ERBB2 receptor tyrosine kinase to increase its phosphorylation on tyrosine residues. NRG1 is a trophic factor that has been implicated in neural development, neurotransmission, and synaptic plasticity. NRG1 has multiple isoforms that are generated by usage of different promoters and alternative splicing of a single gene. Neuregulin 1 (NRG1) is essential for the development and function of multiple organ systems, and its dysregulation has been linked to diseases such as cancer and schizophrenia. NRG1 is a schizophrenia candidate gene and plays an important role in brain development and neural function. Schizophrenia is a complex disorder, with etiology likely due to epistasis.

References

1. Nicodemus KK. et al., 2010, Arch Gen Psychiatry. 67 (10): 991-1001.
2. Tan W. et al., 2007, J Biol Chem. 282 (33): 24343-51.
3. Holmes WE. et al., 1992, Science. 256 (5060): 1205-10.

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