

Canine NRG1-alpha Protein (ECD, Fc Tag)

Catalog Number: 70084-D02H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

NRG1

Protein Construction:

A DNA sequence encoding the canine NRG1 isoform alpha (XP_858147.1) extracellular domain (Ser19-Lys240) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Canine

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio-Activity

Measured in a serum-free cell proliferation assay using MCF7 human breast cancer cells.

The ED50 for this effect is typically 2-12 µg/mL.

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: Ser 19

Molecular Mass:

The recombinant canine NRG1/Fc is a disulfide-linked homodimer. The reduced monomer comprises 460 amino acids and has a predicted molecular mass of 50.8 kDa. The apparent molecular mass of the protein is approximately 67 kDa in SDS-PAGE under reducing conditions.

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.

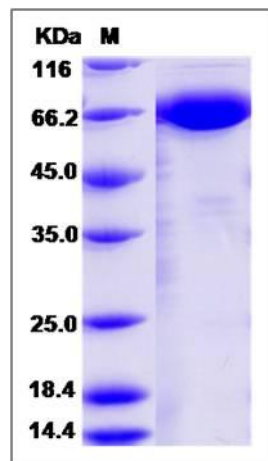
Usage Guide

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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