Recombinant Human NRG1 isoform 9/GGF-2

Catalog Number: 11505-NR

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human Neuregulin-1/NRG1 protein (isoform 9/GGF-2) Gly51-Glu422 Accession # Q02297-9
N-terminal Sequence Analysis	Gly51
Predicted Molecular Mass	40 kDa

SPECIFICATIONS

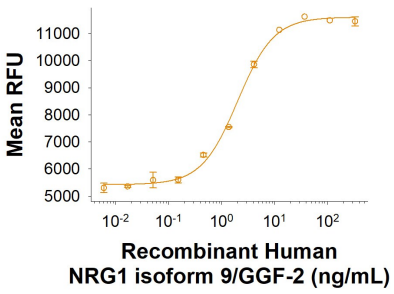
SDS-PAGE	70-80 kDa, under reducing conditions.
Activity	Measured in a serum-free cell proliferation assay using MCF-7 human breast cancer cells. Karey, K.P. *et al.* (1988) Cancer Research **48**:4083. The ED_{50} for this effect is 0.750-7.50 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

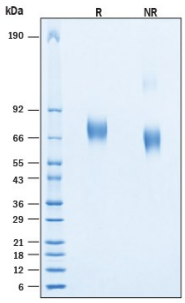
DATA

Bioactivity



Recombinant Human NRG1 isoform 9/GGF-2 Protein Bioactivity. Measured in a serum-free cell proliferation assay using MCF-7 human breast cancer cells. The ED_{50} for this effect is 0.750-7.50 ng/mL.

SDS-PAGE



Recombinant Human NRG1 isoform 9/GGF-2 Protein SDS-PAGE. 2 µg/lane of Recombinant Human NRG1 isoform 9/GGF-2 Protein (Catalog # 11505-NR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 70-80 kDa, under reducing conditions.

BACKGROUND

Glial growth factor2, GGF-2, also known as cimaglermin alfa or NRG1β3 (1), is a full-length splice variant of the Neuregulin-1 (NRG1) family gene. NRG1 is one of the four members of the neuregulin family of genes (NRG1-4) encoding signaling proteins that facilitate cell–cell interactions in many tissues, including the nervous system and the heart (2). All family members share an EGF-like domain that interacts with the ErbB family of tyrosine kinase receptors. Through their displayed interaction with ERBB receptors, NRG1 isoforms induce the growth and differentiation of epithelial, neuronal, glial, and other types of cells. The ErbB2 and ErbB4 receptors cooperate in transmission of neuregulin-1 signals in the heart, whereas ErbB2 and ErbB3 cooperate in neural crest cells.Neuregulins are emerging as potential treatments for heart failure. GGF-2 was chosen as a development candidate with potentially long-lasting pharmacodynamic activity (4).

References:

1. Dimayuga, F.O. *et al.* (2003) J Neuroimmunol **136**:67.
2. Falls D.L. (2003). Exp. Cell Res. **284**:14.
3. Marchionni M.A. *et al.* (1999) Adv Exp Med Biol. **468**:283.
4. Caggiano A.O. *et al.* (2017) Eur J Pharmacol.**796**:76.

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