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NRG1 B1 Human

Neuregulin-1/Heregulin-b1 Human Recombinant
NTR0051

Product Overview

Name	NRG1 B1 Human

Description

Neuregulin-1/Heregulin-b1 Human Recombinant

Synonyms

Neuregulin-1, Heregulin-b1, NRG1-B1, NRG1 B1.

Introduction

Neuregulin/Heregulin is a family of structurally related polypeptide growth factors which are stemmed from alternatively spliced genes (NRG1, NRG2, NRG3 and NRG4). Thus far, there are more than 14 soluble and transmembrane proteins derived from the NRG1 gene. Proteolytic processing of the extracellular domain of the transmembrane NRG1 isoforms release soluble growth factors. HRG1-b1 is comprised of an Ig domain and an EGF-like domain which is necessary for direct binding to receptor tyrosine kinases erb3 and erb4. This binding stimulates erb3 and erb4 heterodimerization with erb2, promoting intrinsic kinase activity, which results in tyrosine phosphorylation. Even though HRG1-b1 biological effects are still unclear, it has been discovered to advance motility and invasiveness of breast cancer cells which in addition might entail up-regulation of expression and function of the autocrine motility-promoting factor (AMF).

Source

Escherichia Coli.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 μm filtered solution in 1×PBS, pH 7.4 and 5% trehalose.

Stability

Lyophilized NRG1-B1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution NRG1-B1 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Amino acid sequence

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SHLVKCAEKE KTFCVNGGEC FMVKDLSNPS RYLCKCPNEF TGDRCQNYVM ASFYKHLGIE FMEAE.

Biological Activity

The ED 50 was determined by the dose-dependent stimulation of the proliferation of human MCF-7 cells is less than 0.5ng/ml, corresponding to a specific activity of >2.0×10 6 units/mg.

Solubility

It is recommended to reconstitute the lyophilized NRG1-B1 in sterile 18M-cm H 2 O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Precautions

NRG1 B1 Human is for research use only and not for use in diagnostic or therapeutic procedures.