

Recombinant Human NRG1 protein

Cat. No. NRG1-16H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human NRG1 protein was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	65
Description	Neuregulin 1 belongs to a family of structurally related polypeptide growth factors and is produced in numerous isoforms by alternative splicing, which allows it to perform a wide variety of functions. These isoforms include heregulins (HRGs), glial growth factors (GGFs) and sensory and motor neuron-derived factor (SMDF). They all have the Ig and EGF-like domain, and can bind to ErbB3 and ErbB4 receptor tyrosin kinases. This binding induces ErbB3 and ErbB4 heterodimerization with ErbB2, stimulating intrinsic kinase activity, which leads to tyrosine phosphorylation. NRG1 isoforms have functions of inducing the growth and differentiation of epithelial, neuronal, glial, and other types of cells.
Form	Lyophilized from a 0.2µm filtered solution in 20 mM PB, pH 6.0, 150 mM NaCl.
Bio-activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 40 ng/ml, corresponding to a specific activity of 2.5×10^4 IU/mg.
Molecular Mass	Approximately 7.4 kDa, a single non-glycosylated polypeptide chain containing 65

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	amino acids.
AA Sequence	SHLVKCAEKEKTFVNGGECFMVKDLSNPSRYLCKCQPGFTGARCTENVPMKVQN QEKAEEELYQK
Endotoxin	Less than 0.1 EU/μg of rHuNRG1-α as determined by LAL method.
Purity	>97% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	NRG1
Official Symbol	NRG1
Synonyms	NRG1; neuregulin 1; HGL; pro-neuregulin-1, membrane-bound isoform; GGF; HRG; NDF; MSTP131; pro-NRG1; glial growth factor; neu differentiation factor; neuregulin 1 type IV beta 3; neuregulin 1 type IV beta 1a; sensory and motor neuron derived factor; heregulin, alpha (45kD, ERBB2 p185-activator); ARIA; GGF2; HRG1; HRGA; SMDF; MST131;

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Gene ID	3084
mRNA Refseq	NM_001159995
Protein Refseq	NP_001153467
MIM	142445
UniProt ID	Q02297

SDS-PAGE of NRG1-16H

