

Recombinant Human Neuregulin 1, HQ-tagged

Cat. No. NRG1-1280H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant humanNRG1 contains 62 amino acids and a 16 aa HQ tag. Total length is 78 aa.
Species	Human
Source	Hordeum Vulgare
Description	NRG1 is a signaling protein for ErbB2/ErbB4 receptor heterodimers on the cardiac muscle cells, playing an important role in heart structure and function through inducing ErbB2/ErbB4 receptor phosphorylation and cardiomyocyte differentiation. Research on molecular level discovered that recombinant neuregulin could make disturbed myocardial cell structure into order and strengthen the connection between myocardial cells by intercalated disc re-organization.
Form	Lyophilized from a 0.2 umg sterile filtered solution of PBS, pH 7.2.
Purity	> 98% by SDS-PAGE. Purified product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using custom human Multiplex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction.
Endotoxin Level	< 0.005ng per ug of product (0.05 EU/ug) as measured by turbidimetric kinetic assay.
Biological Activity	Determined by dose-dependent cell proliferation assay for MCF-7 cells. ED50 for a typical batch of NRG1 lies in the range of 0.9-1.3 ng/ml.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Specific Activity	1.11 x 10 ⁶ units/mg
Reconstitution	Centrifuge vial prior to opening. First add sterile distilled water to the vial to fully solubilize the protein to a concentration not less than 100 ug/ml. After complete solubilization of the protein, it can be further diluted to other aqueous solutions.
storage	The lyophilized protein, though stable at room temperature for two weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Official Symbol	NRG1
Pathways	ErbB signaling pathway; Glypican1 network; MicroRNAs in cardiomyocyte hypertrophy

GENE INFORMATION

Gene Name	NRG1 neuregulin 1 [Homosapiens]
Synonyms	NRG1; neuregulin 1; GGF; HGL; HRG; NDF; ARIA; GGF2; HRG1; HRGA; SMDF; Neuregulin-1, sensory and motor neuron-derived factor isoform; Pro-neuregulin-1, membrane-bound isoform precursor; neu differentiation factor; neuregulin 1; sensory and motor neuron derived factor; Pro-NRG1; glial growth factor; heregulin, alpha (45kD, ERBB2 p185-activator)
Gene ID	3084
mRNA Refseq	NM_004495
Protein Refseq	NP_004486

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MIM	142445
UniProt ID	Q15491
Chromosome Location	8p12
Function	growth factor activity; receptor tyrosine kinase binding; Molecular function; ErbB-3 class receptor binding; transcription cofactor activity; transmembrane receptor protein tyrosine kinase activator activity
PDB rendering based on 1hae.	

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