

NRG-1 (EGF-like domain)

Human, Recombinant (rHuNRG-1)

Expressed in *E. coli*

Cat. No. CRP0883

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Neuregulin 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 discs re-organization.

Amino-Acid Sequence: 61 aa, non-glycosylated

M. W. : 7,005 Da

Recombinant: Expressed in *E. coli*

Purity: >96% by SDS-PAGE and HPLC analyses.

Formulation: Lyophilized from a 0.2mm filtered solution (0.25mg/ml) in 20mM PB, pH 7.0, containing 0.5%HAS and 2% mannitol.

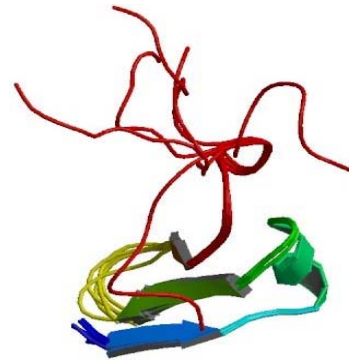
Biological Activity: Fully biologically active when compared to standard. The activity measured by its ability to stimulate the proliferation of human MCF-7 cells grown under serum-free conditions corresponding to a specific activity of 1.2×10^4 Units/mg.

Endotoxin: Less than 1EU/mg of rHuNRG-1 as determined by LAL method.

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 $\leq -20^\circ\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Storage: This lyophilized preparation is stable for several weeks at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C . Avoid repeated freeze/thaw cycles.

FOR RESEARCH USE ONLY



[PDB](#) rendering based on 1e4s.

GENE INFORMATION

Gene Name: [NRG1](#)

Synonyms: 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)

mRNA Refseq: [NM_004495](#)

Protein Refseq: [NP_004486](#)

MIM: [142445](#)

GeneID: [3084](#)

Uniprot ID: [Q15491](#)

Chromosome Location: 8p12

Pathway: ErbB signaling pathway

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

REFERENCES

- 1.Steinthorsdottir V, Stefansson H, Ghosh S, Birgisdottir B, Bjornsdottir S, Fasquel AC, Olafsson O, Stefansson K, Gulcher JR. Multiple novel transcription initiation sites for NRG1. *Gene*.2004;342 (1): 97–105.
2. Corfas G, Roy K, Buxbaum JD. Neuregulin 1-erbB signaling and the molecular/cellular basis of schizophrenia. *Nat. Neurosci*. 2004;7 (6): 575–580.
- 3.Harrison PJ, Law AJ. Neuregulin 1 and schizophrenia: genetics, gene expression, and neurobiology. *Biol. Psychiatry* .2006;60 (2): 132–140.

@ 2005-2008 Creative Biolabs. All rights reserved.

21 Brookhaven BLVD ·Port Jefferson Station, NY 11776, USA
Technical Support: T: 631-871-5806 ·F: 631-207-8356
E-mail: info@creative-biolabs.com
www.creative-biolabs.com