

NRG1

Recombinant Human Neuregulin 1 / Heregulin 1

Catalog No.	CRH005B CRH005C	Quantity:	50 µg 1.0 mg
Alternate Names:	ARIA, GGF, GGF2, HGL, HRG, HRG1, HRGA, NDF, SMDF		
Description:	<p>Neuregulin/Heregulin is a family of structurally related polypeptide growth factors derived from alternatively spliced genes (NRG1, NRG2, NRG3 and NRG4). To date, there are over 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.</p> <p>Neuregulin 1 contains an Ig domain and an EGF-like domain that is necessary for direct binding to receptor tyrosine kinases erb3 and erb4. This binding induces erb3 and erb4 heterodimerization with erb2, stimulating intrinsic kinase activity, which leads to tyrosine phosphorylation. Although NRG1's biological effects are still unclear, it has been found to promote motility and invasiveness of breast cancer cells which may also involve up-regulation of expression and function of the autocrine motility-promoting factor (AMF).</p> <p>Recombinant Human Neuregulin 1 is a 7.5 kDa polypeptide consisting of only the EGF domain (65 amino acid residues).</p>		
GeneID:	3084		
Source:	<i>E. coli</i>		
Molecular Weight:	7.5 kDa		
Formulation:	Lyophilized from a solution containing 20 mM Phosphate Buffer, pH 7.0 + 0.5% HSA + 2.0% Mannitol		
Purity:	Greater than 98% by SDS-PAGE gel and HPLC analyses		
Endotoxin Level:	<0.1 ng per µg		
Biological Activity:	The ED ₅₀ as determined by the dose-dependent stimulation of the proliferation of human MCF-7 cells is < 0.5 ng/ml.		
Specific Activity:	> 2 x 10 ⁶ units/mg.		
Reconstitution:	Centrifuge vial prior to opening. First add sterile distilled water to the vial to fully solubilized the protein to a concentration of 0.1-1.0 mg/ml. After complete solubilization of the protein it can be further diluted to other aqueous solutions.		
Storage & Stability:	The lyophilized protein is best stored at -20°C. Reconstituted protein may be stored at 2-4°C for 1 week. For longer term use, it should be stored in working aliquots at -20°C. For long term stability, it is recommended to add a carrier protein such as 0.1% HSA or BSA. Avoid repeated freeze-thaw cycles.		

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