Active Recombinant Human NRG1 Protein (HRG1-alpha EGF Domain), Fc tagged

Cat. No. NRG1-20H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	NRG1;Neuregulin-1;HRG1-alpha;HRG;NDF;GGF;ARIA;SMDF;EGF domain;ErbB receptor;cell proliferation;breast cancer
Species	Human
Source	HEK293
ProteinLength	Ser177-Pro226 (EGF domain, 50aa) + Human IgG1 Fc (Pro100-Lys330)
Description	Neuregulin-1 (NRG1) belongs to a family of structurally related glycoproteins encoded by four distinct but related genes (Nrg1, Nrg2, Nrg3, Nrg4). All NRG1 isoforms share an EGF-like domain that is necessary and sufficient for direct binding to ErbB3 or ErbB4 receptor tyrosine kinases. NRG1 plays a critical role in mediating cell-cell signaling and is involved in the growth and development of multiple organ systems. It activates ERBB2/ERBB3 and ERBB2/ERBB4 heterodimers and stimulates cell proliferation, differentiation, and survival through PI3K/Akt and ERK1/2 signaling pathways. NRG1 is associated with cancer, schizophrenia, and bipolar disorder.
Form	Lyophilized
Bio-activity	Measured in a serum-free cell proliferation assay using MCF-7 human breast cancer cells (Karey, K.P. et al., 1988, Cancer Research 48:4083). ED50 = 4.00-40.0 ng/mL.
Molecular Mass	Predicted: 32 kDa; Observed: 36-43 kDa (reducing), 72-86 kDa (non-reducing,

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	disulfide-linked homodimer) by SDS-PAGE
AASequence	Human NRG1/HRG1-alpha EGF domain (Ser177-Pro226) fused to Human IgG1 Fc (Pro100-Lys330). N-terminal sequencing confirmed: Ser177. Accession # NP_039254. 1. EGF domain sequence: SHLVKCAEKEKTFCVNGGECFMVKDLSNPSRYLCKCQP GFTGARCTENVPMK
Endotoxin	< 0.10 EU/ug (LAL method)
Purity	> 95% (by SDS-PAGE with Silver Staining and Coomassie Blue densitometry)
Applications	Bioactivity; Cell Proliferation Assay
Storage	Lyophilized: Store at -20 to -70 degrees C; Reconstituted: Store at 2 to 8 degrees C for up to 1 month, or at -20 to -70 degrees C for longer term
Concentration	Reconstitute at 100 ug/mL in sterile PBS
Shipping	Cold pack (lyophilized)
Reconstitution	Reconstitute at 500 µg/mL in PBS
Storage Buffer	Lyophilized from a 0.2 um filtered PBS solution containing trehalose

GENE INFORMATION

Gene Name	NRG1
Official Symbol	NRG1
Synonyms	GGF;HGL;HRG;NDF;ARIA;GGF2;HRG1;HRGA;SMDF

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Gene ID	3084
mRNA Refseq	NM_013964.5
Protein Refseq	NP_039258.1
MIM	142445
UniProt ID	Q02297

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