

Recombinant Human/Bovine/Porcine NRG1 Protein

Cat. No. NRG1-29H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human/bovine/porcine NRG-1 protein without tag was expressed in E. coli. Animal-free (AOF) and carrier protein-free. Mass spectrometry: single species with expected mass. Analytical reversed-phase: single sharp peak. Recovery from stock vial: >95%
Species	Human
Source	E.coli
Description	The protein encoded by this gene is a membrane glycoprotein that mediates cell-cell signaling and plays a critical role in the growth and development of multiple organ systems. An extraordinary variety of different isoforms are produced from this gene through alternative promoter usage and splicing. These isoforms are expressed in a tissue-specific manner and differ significantly in their structure, and are classified as types I, II, III, IV, V and VI. Dysregulation of this gene has been linked to diseases such as cancer, schizophrenia, and bipolar disorder (BPD).
Molecular Mass	7.5 kDa
Endotoxin	<0.005 EU/μg protein (below level of detection)
Applications	Maintenance of pluripotency in human iPSC; cell culture media optimisation and replacement of insulin in defined media

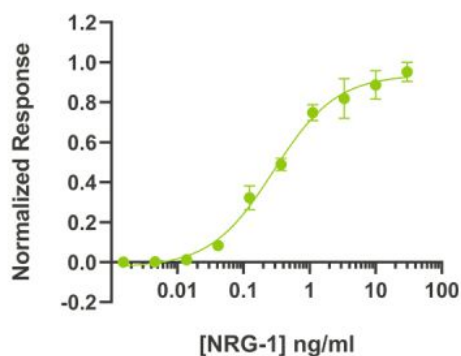
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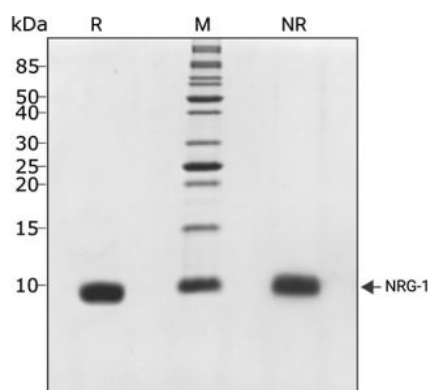
Storage	Resuspend in water at >100 µg/mL, prepare single use aliquots, add carrier protein if desired and store frozen at -20 or -80 centigrade
Storage Buffer	Lyophilized from acetonitrile, TFA
GENE INFORMATION	
Gene Name	NRG1 neuregulin 1 [Homo sapiens (human)]
Official Symbol	NRG1
Synonyms	NRG1; neuregulin 1; GGF; HGL; HRG; NDF; ARIA; GGF2; HRG1; HRGA; SMDF; MST131; MSTP131; NRG1-IT2; pro-neuregulin-1, membrane-bound isoform; acetylcholine receptor-inducing activity; glial growth factor 2; heregulin, alpha (45kD, ERBB2 p185-activator); neu differentiation factor; pro-NRG1; sensory and motor neuron derived factor
Gene ID	3084
mRNA Refseq	NM_013960
Protein Refseq	NP_039254
MIM	142445
UniProt ID	Q02297

Bioactivity



NRG-1 activity is determined using the serum response element luciferase reporter assay in transfected MCF-7 cells. EC₅₀ = 0.28 ng/mL (37.9 pM). Cells are treated in triplicate with a serial dilution of NRG-1 for 4 hours. Firefly luciferase activity is measured and normalized to the control Renilla luciferase activity.

Purity



NRG-1 migrates as a single band at 7.5 kDa in non-reducing conditions and upon reduction (R). No contaminating protein bands are visible. Purified recombinant protein was resolved using 18% w/v SDS-PAGE in reduced and non-reduced conditions and stained with Coomassie Brilliant Blue R250.

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