NRG1 Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	NRG1, Blocking Peptide
Full Product Name	NRG1 Blocking Peptide
Product Gene Name	NRG1 blocking peptide
Product Synonym Names	Acetylcholine receptor-inducing activity; Acetylcholine receptor-inducing activity, CHICK, homolog of; ARIA; Breast cancer cell differentiation factor p45; GGF; GGF2; Glial growth factor; Heregulin; heregulin, alpha (45kD, ERBB2 p185-activator); HGL; HRG; HRG1; HRGA; MST131; NDF; Neu differentiation factor; Neuregulin 1; neuregulin 1 type IV beta 1a; neuregulin 1 type IV beta 3; Neuregulin-1; NRG 1; nrg1; NRG1-IT2; NRG1_HUMAN; OTTHUMP00000225398; OTTHUMP00000225419; OTTHUMP00000225420; OTTHUMP00000225421; OTTHUMP00000225422; OTTHUMP00000225477; OTTHUMP00000225545; OTTHUMP00000230603; OTTHUMP00000230605; pro-neuregulin-1, membrane-bound isoform; Pro-NRG1; ProNRG1; Sensory and motor neuron-derived factor; SMDF
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	NRG1 peptide (MBS9625503) is used for blocking the activity of NRG1 antibody (MBS9606786)
Molecular Weight	70,392 Da
Chromosome Location	Chromosome: 8; NC_000008.10 (31496820..32622558). Location: 8p12
OMIM	142445
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for NRG1 blocking peptide	Blocking/Control
Related Product Information for NRG1 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of NRG1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NRG1 purchase	MBS9625503 is a blocking peptide targeting NRG1.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NRG1. It may not necessarily be applicable to this product.

NCBI GI #	236461509

NCBI GeneID	3084
NCBI Accession #	NP_001153467.1
UniProt Primary Accession #	Q02297
UniProt Secondary Accession #	O14667; P98202; Q02298; Q02299; Q07110; Q07111; A5YAK4; A5YAK5; A8K1L2; B7Z4Z3; E9PHH4
UniProt Related Accession #	Q02297
GenBank Nucleotide #	NM_001159995.2
NCBI Official Full Name	pro-neuregulin-1, membrane-bound isoform isoform HRG-beta1c
NCBI Official Synonym Full Names	neuregulin 1
NCBI Official Symbol	NRG1
NCBI Official Synonym Symbols	GGF; HGL; HRG; NDF; ARIA; GGF2; HRG1; HRGA; SMDF; MST131
UniProt Protein Name	Pro-neuregulin-1, membrane-bound isoform
UniProt Synonym Protein Names	Acetylcholine receptor-inducing activity; ARIA; Breast cancer cell differentiation factor p45; Glial growth factor; Heregulin; HRG; Neu differentiation factor; Sensory and motor neuron-derived factor
Protein Family	Pro-neuregulin
UniProt Gene Name	NRG1
UniProt Synonym Gene Names	GGF; HGL; HRGA; NDF; SMDF; Pro-NRG1; ARIA; HRG
UniProt Entry Name	NRG1_HUMAN
NCBI Protein Information	pro-neuregulin-1, membrane-bound isoform; MSTP131; pro-NRG1; glial growth factor; neu differentiation factor; neuregulin 1 type IV beta 3; neuregulin 1 type IV beta 1a; sensory and motor neuron derived factor; heregulin, alpha (45kD, ERBB2 p185-activator)
NCBI Summary for NRG1	The protein encoded by this gene was originally identified as a 44-kD glycoprotein that interacts with the NEU/ERBB2 receptor tyrosine kinase to increase its phosphorylation on tyrosine residues. This protein is a signaling protein that mediates cell-cell interactions and plays critical roles in the growth and development of multiple organ systems. It is known that an extraordinary variety of different isoforms are produced from this gene through alternative promoter usage and splicing. These isoforms are tissue-specifically expressed and differ significantly in their structure, and thereby these isoforms are classified into types I, II, III, IV, V and VI. The gene dysregulation has been linked to diseases such as cancer, schizophrenia and bipolar disorder (BPD). [provided by RefSeq, May 2009]

UniProt Comments for NRG1	NRG1: Direct ligand for ERBB3 and ERBB4 tyrosine kinase receptors. Concomitantly recruits ERBB1 and ERBB2 coreceptors, resulting in ligand-stimulated tyrosine phosphorylation and activation of the ERBB receptors. The multiple isoforms perform diverse functions such as inducing growth and differentiation of epithelial, glial, neuronal, and skeletal muscle cells; inducing expression of acetylcholine receptor in synaptic vesicles during the formation of the neuromuscular junction; stimulating lobuloalveolar budding and milk production in the mammary gland and inducing differentiation of mammary tumor cells; stimulating Schwann cell proliferation; implication in the development of the myocardium such as trabeculation of the developing heart. Isoform 10 may play a role in motor and sensory neuron development. The cytoplasmic domain interacts with the LIM domain region of LIMK1. Interacts with ERBB3 and ERBB4. Type I isoforms are the predominant forms expressed in the endocardium. Isoform alpha is expressed in breast, ovary, testis, prostate, heart, skeletal muscle, lung, placenta liver, kidney, salivary gland, small intestine and brain, but not in uterus, stomach, pancreas, and spleen. Isoform 3 is the predominant form in mesenchymal cells and in non-neuronal organs, whereas isoform 6 is the major neuronal form. Isoform 8 is expressed in spinal cord and brain. Isoform 9 is the major form in skeletal muscle cells; in the nervous system it is expressed in spinal cord and brain. Also detected in adult heart, placenta, lung, liver, kidney, and pancreas. Isoform 10 is expressed in nervous system: spinal cord motor neurons, dorsal root ganglion neurons, and brain. Predominant isoform expressed in sensory and motor neurons. Not detected in adult heart, placenta, lung, liver, skeletal muscle, kidney, and pancreas. Not expressed in fetal lung, liver and kidney. Type IV isoforms are brain-specific. Belongs to the neuregulin family. 10 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, integral; Cell development/differentiation; Ligand, receptor tyrosine kinase; Motility/polarity/chemotaxis; Cytokine Chromosomal Location of Human Ortholog: 8p12 Cellular Component: extracellular space; membrane; integral to plasma membrane; axon; apical plasma membrane; cytoplasm; extracellular region; nucleus; neuromuscular junction Molecular Function: ErbB-2 class receptor binding; protein binding; transmembrane receptor protein tyrosine kinase activator activity; growth factor activity; ErbB-3 class receptor binding; transcription cofactor activity; cytokine activity; protein tyrosine kinase activator activity; receptor tyrosine kinase binding; receptor binding Biological Process: regulation of protein heterodimerization activity; positive regulation of cell adhesion; transmembrane receptor protein tyrosine kinase activation (dimerization); neural crest cell development; cellular protein complex disassembly; nerve growth factor receptor signaling pathway; wound healing; cell morphogenesis; ventricular cardiac muscle cell differentiation; locomotory behavior; positive regulation of striated muscle cell differentiation; cardiac muscle cell differentiation; synaptogenesis; mammary gland development; cell communication; positive regulation of cardiac muscle cell proliferation; epidermal growth factor receptor signaling pathway; nervous system development; cell migration; fibroblast growth factor receptor signaling pathway; phosphoinositide-mediated signaling; neurotransmitter receptor metabolic process; regulation of protein homodimerization activity; MAPKKK cascade; neuron fate commitment; positive regulation of cell growth; peripheral nervous system development; positive regulation of protein kinase B signaling cascade; cell proliferation; embryonic development; glial cell fate commitment; innate immune response; negative regulation of secretion; positive regulation of Ras protein signal transduction; negative regulation of protein catabolic process; negative regulation of transcription, DNA-dependent; transmembrane receptor protein tyrosine kinase signaling pathway Disease: Schizophrenia 6
Research Articles on NRG1	**1.** NRG1 is a putative susceptibility gene for a spectrum of major psychiatric disorders such as schizophrenia
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