

Rabbit NRG1 Polyclonal Antibody | anti-NRG1 antibody

NRG1 Antibody

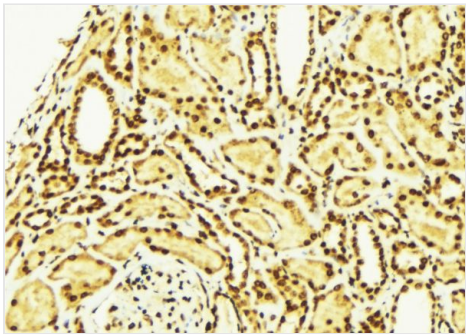
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA325911	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

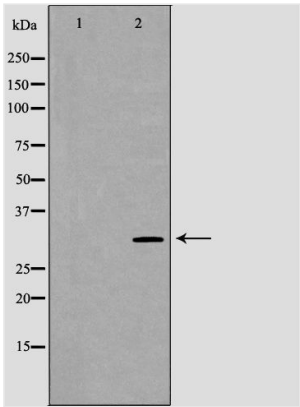
NRG1; Polyclonal Antibody; NRG1 Antibody; Acetylcholine receptor-inducing activity; CHICK; homolog of; ARIA; Breast cancer cell differentiation factor p45; GGF; GGF2; Glial growth factor; Heregulin; heregulin; alpha (45kD; ERBB2 p185-activator); HGL; HRG; HRG1; HRGA; MST131; NDF; Neu differentiation 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; anti-NRG1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	NRG1 antibody detects endogenous levels of total NRG1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	607
Applicable Applications for anti-NRG1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human NRG1
Subcellular Location	Secreted; Cell Membrane. Does not seem to be active; Membrane. May possess an internal uncleaved signal sequence; Nucleus. May be nuclear and Secreted. Has a signal peptide.
Tissue Specificity	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.
Predicted Cross Reactivity	Bovine, Horse, Rabbit, Dog
Similarity	Bovine (92%), Horse (92%), Rabbit (100%), Dog (92%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemistry)
AAA325911 at 1/100 staining Mouse kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of MCF7 lysate using NRG1 antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-NRG1 antibody

Description: Heregulin (HRG), also called neuregulin (NRG1), neu differentiation factor (NDF) or glial growth factor-2 (GGF-2), is a soluble growth factor synthesized as a transmembrane precursor molecule. Metalloproteinases and other proteases catalyze the cleavage of its extracellular domain which is then released and functions as a ligand for ErbB3 and ErbB4 receptor tyrosine kinase. The signaling pathways of HRG-ErbB3/ErbB4 are involved in regulation of cell proliferation, differentiation, invasion, and survival of both normal and malignant tissues (1, 2). Abnormality of HRG-ErbB signaling leads to development of a variety of human diseases. HRG family has four isoforms including HRG-1, -2, -3 and -4, which are derived from alternative exon splicing. Moreover, they showed various tissue expression and biological activities (3).

Function: 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. Binds to ERBB4 (PubMed:10867024, PubMed:7902537). Binds to ERBB3 (PubMed:20682778). Acts as a ligand for integrins and binds (via EGF domain) to integrins ITGAV:ITGB3 or ITGA6:ITGB4. Its binding to integrins and subsequent ternary complex formation with integrins and ERBB3 are essential for NRG1-ERBB signaling. Induces the phosphorylation and activation of MAPK3/ERK1, MAPK1/ERK2 and AKT1 (PubMed:20682778). Ligand-dependent ERBB4 endocytosis is essential for the NRG1-mediated activation of these kinases in neurons (By similarity).

Subunit Structure: The cytoplasmic domain interacts with the LIM domain region of LIMK1 (By similarity). Forms a ternary complex with ERBB3 and ITGAV:ITGB3 or ITGA6:ITGB4 (PubMed:20682778).

Post-translational Modifications: Proteolytic cleavage close to the plasma membrane on the external face leads to the release of the soluble growth factor form. N- and O-glycosylated. Extensive glycosylation precedes the proteolytic cleavage (By similarity).

Similarity: The cytoplasmic domain may be involved in the regulation of trafficking and proteolytic processing. Regulation of the proteolytic processing involves initial intracellular domain dimerization (By similarity). ERBB receptor binding is elicited entirely by the EGF-like domain. Belongs to the neuregulin family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	236461509
NCBI GeneID	3084
NCBI Accession #	NP_001153467.1
NCBI GenBank Nucleotide #	NM_001159995.2
UniProt Accession #	Q02297; O14667; P98202; Q02298; Q02299; Q07110; Q07111; A5YAK4; A5YAK5; A8K1L2; B7Z4Z3; E9PHH4

Molecular Weight	Observed: 32 kDa Predicted: 71 kDa
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; MSTP131; NRG1-IT2
NCBI Protein Information	pro-neuregulin-1, membrane-bound isoform
UniProt Protein Name	Pro-neuregulin-1, membrane-bound isoform
UniProt Gene Name	NRG1
UniProt Synonym Gene Names	GGF; HGL; HRGA; NDF; SMDF; Pro-NRG1; ARIA; HRG

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/nrg1-antibody-immunohistochemistry-western-blot-elisa/325911>