abcam

Product datasheet

Anti-NRG1 antibody - C-terminal ab191139

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Overview

Product name	Anti-NRG1 antibody - C-terminal
Description	Rabbit polyclonal to NRG1 - C-terminal
Host species	Rabbit
Tested applications	**Suitable for:** IHC-Fr, ICC, WB, IHC-P
Species reactivity	**Reacts with:** Rat, Human **Predicted to work with:** Mouse, Chicken, Xenopus laevis
Immunogen	Synthetic peptide corresponding to Human NRG1 aa 600 to the C-terminus (C terminal). Immunogen is from isoforms 1, 2, 6, 7, and 11. Database link: **Q02297** Run BLAST with Run BLAST with
Positive control	Rat Spleen, Kidney and Brain Tissue Lysate. HeLa and SMMC Cell Lysate. Rat Intestine and Intestinal cancer Tissue. HeLa cells.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservatives: 0.025% Thimerosal (merthiolate), 0.025% Sodium azide Constituents: 2.5% BSA, 0.45% Sodium chloride, 0.1% Dibasic monohydrogen sodium phosphate
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab191139 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr		Use a concentration of 0.5 - 1 µg/ml.
ICC		Use a concentration of 0.5 - 1 µg/ml.
WB		Use a concentration of 0.1 - 0.5 µg/ml. Predicted molecular weight: 70 kDa.
IHC-P	★★★★★ (2)	Use a concentration of 0.5 - 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

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.

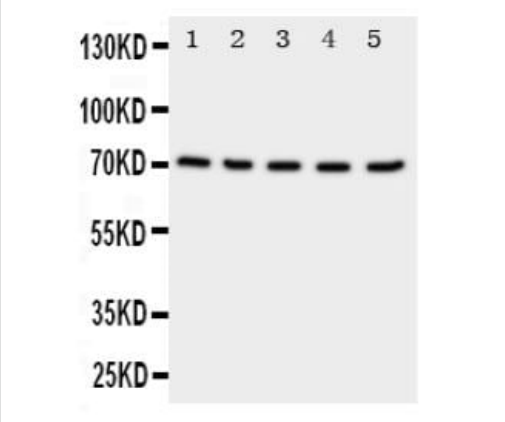
Tissue specificity Type I isoforms are the predominant forms expressed in the endocardium. Isoform alpha is expressed in breast, ovary, testis, prostate, heart, skeletal muscle, lung, placenta liver, kidney, salivary gland, small intestine and brain, but not in uterus, stomach, pancreas, and spleen. 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.

Involvement in disease Note=A chromosomal aberration involving NRG1 produces gamma-heregulin. Translocation t(8;11) with ODZ4. The translocation fuses the 5'-end of ODZ4 to NRG1 (isoform 8). The product of this translocation was first thought to be an alternatively spliced isoform. Gamma-heregulin is a soluble activating ligand for the ERBB2-ERBB3 receptor complex and acts as an autocrine growth factor in a specific breast cancer cell line (MDA-MB-175). Not detected in breast carcinoma samples, including ductal, lobular, medullary, and mucinous histological types, neither in other breast cancer cell lines.

Sequence similarities Belongs to the neuregulin family.

	Contains 1 EGF-like domain. Contains 1 Ig-like C2-type (immunoglobulin-like) domain.
Developmental stage	Detectable at early embryonic ages. Isoform 10 is highly expressed in developing spinal motor neurons and in developing cranial nerve nuclei. Expression is maintained only in both adult motor neurons and dorsal root ganglion neurons. Type IV isoforms are expressed in fetal brain.
Domain	The cytoplasmic domain may be involved in the regulation of trafficking and proteolytic processing. Regulation of the proteolytic processing involves initial intracellular domain dimerization. ERBB receptor binding is elicited entirely by the EGF-like domain.
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.
Cellular localization	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.

Images

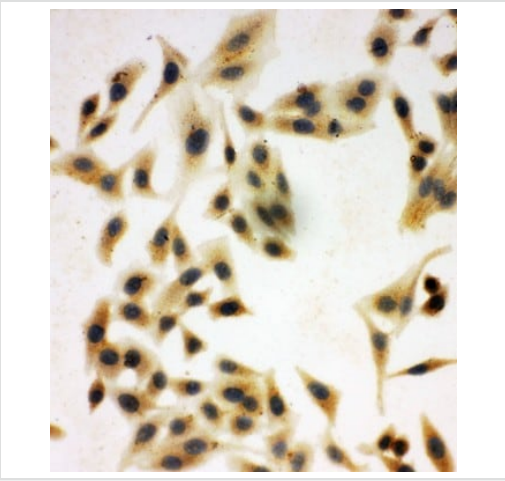


Western blot - Anti-NRG1 antibody - C-terminal (ab191139)

All lanes : Anti-NRG1 antibody - C-terminal (ab191139) at 0.5 µg/ml

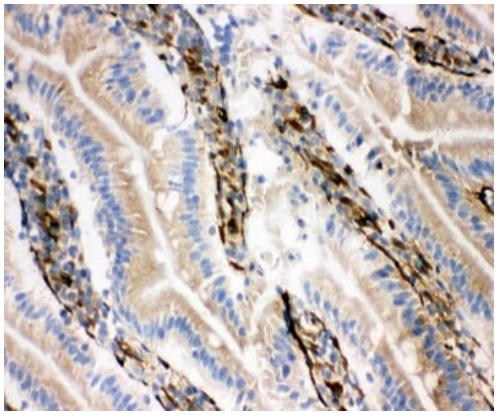
Lane 1 : Rat Spleen Tissue Lysate
Lane 2 : Rat Kidney Tissue Lysate
Lane 3 : Rat Brain Tissue Lysate
Lane 4 : HeLa Cell Lysate
Lane 5 : SMMC Cell Lysate

Predicted band size: 70 kDa



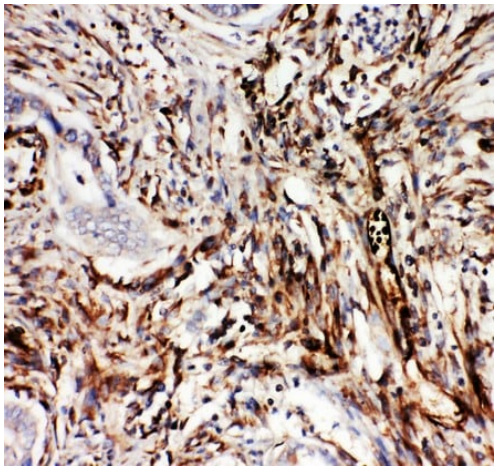
Immunocytochemistry - Anti-NRG1 antibody - C-terminal (ab191139)

Immunocytochemical analysis of HeLa cells labeling NRG1 with ab191139 at 1 µg/ml.



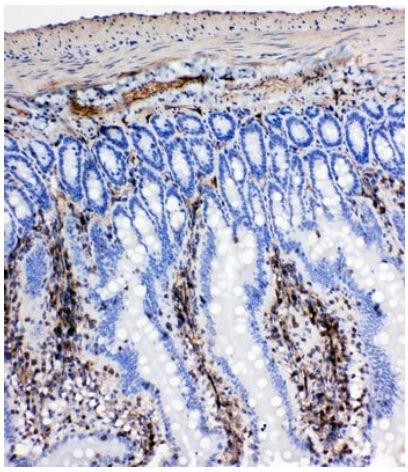
Immunohistochemistry (Frozen sections) - Anti-NRG1 antibody - C-terminal (ab191139)

Immunohistochemical analysis of frozen Rat Intestine Tissue labeling NRG1 with ab191139 at 1 µg/ml.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NRG1 antibody - C-terminal (ab191139)

Immunohistochemical analysis of paraffin-embedded Rat Intestine Cancer Tissue labeling NRG1 with ab191139 at 1 µg/ml.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NRG1 antibody - C-terminal (ab191139)

Immunohistochemical analysis of paraffin-embedded Rat Intestine Tissue labeling NRG1 with ab191139 at 1 µg/ml.

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