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NRG3 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6224a

Product Information

Application	IHC-P, WB, E
Primary Accession	P56975
Other Accession	O35181
Reactivity	Human, Mouse
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	77901
Antigen Region	305-336

Additional Information

Gene ID	10718
Other Names	Pro-neuregulin-3, membrane-bound isoform, Pro-NRG3, Neuregulin-3, NRG-3, NRG3
Target/Specificity	This NRG3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 305-336 amino acids from the Central region of human NRG3.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NRG3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NRG3
Function	Direct ligand for the ERBB4 tyrosine kinase receptor. Binding results in ligand-stimulated tyrosine phosphorylation and activation of the receptor. Does not bind to the EGF receptor, ERBB2 or ERBB3 receptors. May be a

survival factor for oligodendrocytes.

Cellular Location

[Pro-neuregulin-3, membrane-bound isoform]: Cell membrane; Single-pass type I membrane protein. Note=Does not seem to be active. [Isoform 3]: Cell membrane; Single-pass type I membrane protein. Note=Isoform 3 is also proteolytically released as a soluble form

Tissue Location

Highly expressed in most regions of the brain with the exception of corpus callosum. Expressed at lower level in testis Not detected in heart, placenta, lung, liver, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, ovary, small intestine, colon and peripheral blood leukocytes

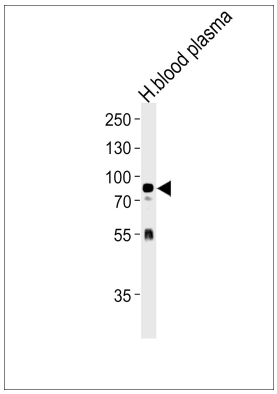
Background

NRG3, which belongs to the neuregulin family, is a direct ligand for the ERBB4 tyrosine kinase receptor. Binding results in ligand-stimulated tyrosine phosphorylation and activation of the receptor. NRG3 does not bind to the EGF receptor, ERBB2 or ERBB3 receptors. The protein exists as an type I membrane protein and as a proteolytically released soluble growth factor form. The membrane-bound form does not appear to be active. NRG3 is highly expressed in most regions of the brain with the exception of corpus callosum, and is expressed at lower level in testis. It is not detected in heart, placenta, lung, liver, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, ovary, small intestine, colon and peripheral blood leukocytes. The NRG3 cytoplasmic domain may be involved in the regulation of trafficking and proteolytic processing. Regulation of the proteolytic processing may involve initial intracellular domain dimerization.

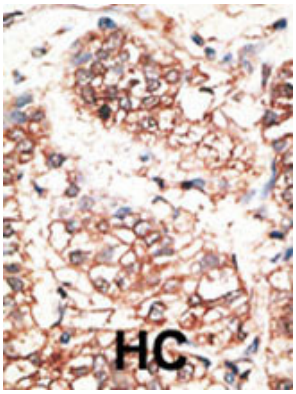
References

Zhang, D., et al., Proc. Natl. Acad. Sci. U.S.A. 94(18):9562-9567 (1997).

Images



NRG3 Antibody (Center)(Cat. #AP6224a) western blot analysis in human blood plasma tissue lysates (35ug/lane).This demonstrates the NRG3 antibody detected the NRG3 protein (arrow).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Levels of neuregulin 1 and 3 proteins in Brodmann's area 46 from subjects with schizophrenia and bipolar disorder.
- Identification of the scaramanga gene implicates Neuregulin3 in mammary gland specification.