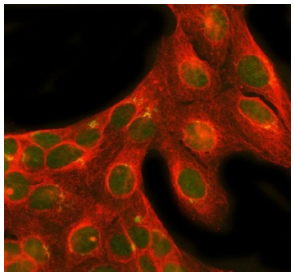
NRG1 Antibody / ErbB Receptor Ligand Antibody (R31075)

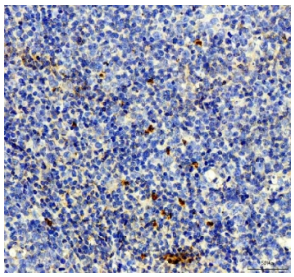
Catalog No.	Formulation	Size
R31075	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

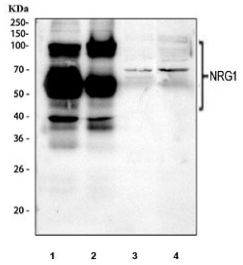
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q02297
Localization	Cytoplasm, nucleus, membrane
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This NRG1 Antibody / ErbB Receptor Ligand Antibody is available for research use only.



NRG1 Antibody in Human U-2 OS Osteosarcoma Cells IF. Immunofluorescence testing of FFPE human U-2 OS osteosarcoma cells with NRG1 Antibody / ErbB Receptor Ligand Antibody (green) and beta-tubulin antibody (red). HIER was performed by steaming in pH 6 citrate buffer for 20 min. NRG1 immunoreactivity is observed predominantly in the cytoplasm and perinuclear regions of the cells.



NRG1 Antibody in Human Tonsil IHC. Immunohistochemistry testing of NRG1 Antibody / ErbB Receptor Ligand Antibody in FFPE human tonsil tissue. HIER was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing. Distinct cytoplasmic immunoreactivity is observed in scattered cells within the lymphoid tissue.



NRG1 Antibody in Human A549, HaCaT, Rat Brain and Mouse Brain WB. Western blot testing of NRG1 Antibody / ErbB Receptor Ligand Antibody in 1) human A549 lung carcinoma cells, 2) human HaCaT keratinocytes, 3) rat brain and 4) mouse brain tissue lysates. Multiple immunoreactive species are observed, including prominent bands around ~55-70 kDa. NRG1 has a predicted molecular weight of approximately 70 kDa, but extensive alternative splicing, glycosylation and proteolytic processing can produce multiple protein forms with differing apparent molecular weights.

Description

NRG1 Antibody / ErbB Receptor Ligand Antibody recognizes neuregulin-1, a multifunctional signaling protein encoded by the NRG1 gene. NRG1 belongs to the neuregulin family of epidermal growth factor-like ligands and is produced in numerous forms through alternative promoter usage and extensive alternative splicing. These isoforms differ in their N-terminal regions, EGF-like domains, membrane topology and processing, contributing to the diverse biological functions associated with neuregulin-1.

NRG1 proteins contain an EGF-like domain responsible for interaction with ErbB receptor tyrosine kinases. Neuregulin-1 binds directly to ErbB3 and ErbB4, promoting formation of receptor homo- or heterodimers that can include ErbB2. Activation of these receptor complexes regulates downstream pathways including PI3K-AKT and MAPK signaling. Through this signaling network, NRG1 influences cellular proliferation, survival, migration and differentiation.

Different NRG1 isoforms can function through soluble, paracrine or membrane-associated signaling mechanisms. Many forms are synthesized as membrane-anchored precursors that undergo proteolytic processing, while certain isoforms remain membrane tethered and mediate signaling between neighboring cells. NRG1-ErbB signaling has particularly important functions in nervous system development and Schwann cell biology and also contributes to cardiac development and homeostasis. Its broad biological activities have additionally made NRG1 relevant to research in cancer, neurobiology and developmental signaling.

This rabbit polyclonal antibody was generated against a C-terminal peptide of human neuregulin-1 and is antigen affinity purified. It recognizes human, mouse and rat NRG1 and has been validated using Western blot, immunohistochemistry and immunofluorescence. NSJ Bioreagents provides this NRG1 Antibody for research into neuregulin expression, developmental biology and receptor-mediated signaling. An ErbB Receptor Ligand Antibody can support investigation of the diverse NRG1 isoforms and their roles in cellular communication.

Explore our Signal Transduction Antibodies page for additional reagents targeting proteins involved in receptor activation, intracellular signaling and regulation of cellular responses.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the NRG1 Antibody / ErbB Receptor Ligand Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human Neuregulin 1 (RFSTQEEIQARLSSVIANQD) was used as the immunogen for this NRG1 antibody.

Storage

After reconstitution, the NRG1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

NRG1 antibody, neuregulin-1 antibody, neuregulin 1 antibody, heregulin antibody, HRG antibody, neu differentiation factor antibody, NDF antibody, ARIA antibody

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