

Neuregulin-2 (H-130): sc-67001

BACKGROUND

The ErbB/HER family of receptor tyrosine kinases consists of four receptors that bind a large number of growth factor ligands sharing an epidermal growth factor-(EGF)-like motif. The neuregulins (NRGs) are a diverse family of proteins that arise by alternative splicing from a single gene. These proteins play an important role in controlling the growth and differentiation of glial, epithelial and muscle cells. Whereas ErbB-1 binds seven different ligands whose prototype is EGF, the four families of neuregulins activate ErbB-3 and/or ErbB-4. Neuregulin-1 (also known as heregulin) has diverse functions in neural development, one of which is to upregulate the expression of acetylcholine receptors at muscle fibers during the formation of neuromuscular junctions. Neuregulin-2 exhibits a distinct expression pattern in adult brain and developing heart. Neuregulin-3 is expressed in cell lines derived from breast cancer and is a potential regulator of normal and malignant breast epithelial cells. Neuregulin-4 is detected in the adult pancreas and weakly in muscle.

REFERENCES

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2. Yarden, Y., et al. 1988. Growth factor receptor tyrosine kinases. *Annu. Rev. Biochem.* 57: 433-478.
3. Holmes, W.E., et al. 1992. Identification of heregulin, a specific activator of p185ErbB-4. *Science* 256: 1205-1210.
4. Marchionni, M.A., et al. 1993. Glial growth factors are alternatively spliced ErbB-2 ligands expressed in the nervous system. *Nature* 362: 312-318.
5. Plowman, G.D., et al. 1993. Heregulin induces tyrosine phosphorylation of HER4/p180ErbB-4. *Nature* 366: 473-475.
6. Carraway, K.L. III, et al. 1994. A Neu acquaintance for ErbB3 and ErbB-4: a role for receptor heterodimerization in growth signaling. *Cell* 78: 5-8.
7. Carraway, K.L. III, et al. 1994. The ErbB-3 gene product is a receptor for heregulin. *J. Biol. Chem.* 269: 14303-14306.
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CHROMOSOMAL LOCATION

Genetic locus: NRG2 (human) mapping to 5q31.2; Nrg2 (mouse) mapping to 18 B2.

SOURCE

Neuregulin-2 (H-130) is a rabbit polyclonal antibody raised against amino acids 242-371 mapping within an N-terminal extracellular domain of Neuregulin-2 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Neuregulin-2 (H-130) is recommended for detection of Neuregulin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Neuregulin-2 (H-130) is also recommended for detection of Neuregulin-2 in additional species, including canine.

Suitable for use as control antibody for Neuregulin-2 siRNA (h): sc-45299, Neuregulin-2 shRNA Plasmid (h): sc-45299-SH and Neuregulin-2 shRNA (h) Lentiviral Particles: sc-45299-V.

Positive Controls: SK-N-MC cell lysate: sc-2237.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Wilson, T.R., et al. 2011. Neuregulin-1-mediated autocrine signaling underlies sensitivity to HER2 kinase inhibitors in a subset of human cancers. *Cancer Cell* 20: 158-172.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


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Try **Neuregulin-2 (A-12): sc-398594** or **Neuregulin-2 (H-8): sc-390646**, our highly recommended monoclonal alternatives to Neuregulin-2 (H-130).