SANTA CRUZ BIOTECHNOLOGY, INC.

Neuregulin-2 (H-8): sc-390646

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. and Ullrich, A. 1988. Growth factor receptor tyrosine kinases. Ann. Rev. Biochem. 57: 433-478.
3. Holmes, W.E., Sliwkowski, M.X., Akita, R.W., Henzel, W.J., Lee, J., Park, J.W., Yansura, D., Abadi, N., Raab, H., Lewis, G.D., Shepard, H.M., Kuang, W., Wood, W.I., Goeddel, D.V. and Vandlen, R.L. 1992. Identification of heregulin, a specific activator of $p185^{erbB2}$. Science 256: 1205-1210.
4. Marchionni, M.A., Goodearl, A.D.J., Chen, M.S., Bermingham-McDonogh, O., Kirk, C., Hendricks, M., Danehy, F., Misumi, D., Sudhalter, J., Kobayashi, K., Wroblewski, D., Lynch, C., et al. 1993. Glial growth factors are alternatively spliced erbB2 ligands expressed in the nervous system. Nature 362: 312-318.

CHROMOSOMAL LOCATION

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

SOURCE

Neuregulin-2 (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 267-298 of Neuregulin-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390646 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Neuregulin-2 (H-8) is recommended for detection of Neuregulin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

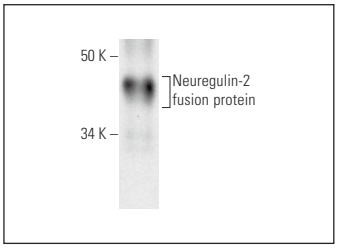
Neuregulin-2 (H-8) is also recommended for detection of Neuregulin-2 in additional species, including canine and bovine.

Suitable for use as control antibody for Neuregulin-2 siRNA (h): sc-45299, Neuregulin-2 siRNA (m): sc-147884, Neuregulin-2 shRNA Plasmid (h): sc-45299-SH, Neuregulin-2 shRNA Plasmid (m): sc-147884-SH, Neuregulin-2 shRNA (h) Lentiviral Particles: sc-45299-V and Neuregulin-2 shRNA (m) Lentiviral Particles: sc-147884-V.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Neuregulin-2 (H-8): sc-390646. Western blot analysis of human recombinant Neuregulin-2 fusion protein.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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