SANTA CRUZ BIOTECHNOLOGY, INC.

ErbB-3 (SPM385): sc-56385

BACKGROUND

The EGF receptor family comprises several related receptor tyrosine kinases that are frequently overexpressed in a variety of carcinomas. Members of this receptor family include EGFR (HER1), Neu (ErbB-2, HER2), ErbB-3 (HER3) and ErbB-4 (HER4), which form either homodimers or heterodimers upon ligand binding. Full length ErbB-3 is overexpressed in human mammary tumors. The ErbB-3 gene also produces several alternative variants, including a secreted form which negatively regulates heregulin stimulated ErbB activation. ErbB-3 heterodimerizes with Neu and binds heregulin in order to activate phosphoinositide (PI) 3-kinase. The recruitment and activation of PI 3-kinase occurs via its interaction with phosphorylated YXXM motifs in the carboxy-terminus of ErbB-3.

REFERENCES

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5. Rajkumar, T. and Gullick, W.J. 1994. The type I growth factor receptors in human breast cancer. Breast Cancer Res. Treat. 29: 3-9.
6. Lee, H., et al. 1998. Isolation and characterization of four alternate c-ErbB-3 transcripts expressed in ovarian carcinoma-derived cell lines and normal human tissues. Oncogene 16: 3243-3252.
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8. Lee, H., et al. 2001. A naturally occurring secreted human ErbB-3 receptor isoform inhibits heregulin-stimulated activation of ErbB-2, ErbB-3 and ErbB-4. Cancer Res. 61: 4467-4473.
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CHROMOSOMAL LOCATION

Genetic locus: ERBB3 (human) mapping to 12q13; Erbb3 (mouse) mapping to 10 D3.

SOURCE

ErbB-3 (SPM385) is a mouse monoclonal antibody raised against ErbB-3 purified from transfected human kidney fibroblasts.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as phycoerythrin (sc-56385 PE) or fluorescein (sc-56385 FITC) conjugates for flow cytometry, 100 tests.

APPLICATIONS

ErbB-3 (SPM385) is recommended for detection of the extracellular domain of ErbB-3 of human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for ErbB-3 siRNA (h): sc-35327 and ErbB-3 siRNA (h2): sc-44298.

Molecular Weight of ErbB-3: 180 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

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 or our catalog for detailed protocols and support products.