

## ErbB-3 (C-17): sc-285

### 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.

### CHROMOSOMAL LOCATION

Genetic locus: ERBB3 (human) mapping to 12q13.2; Erbb3 (mouse) mapping to 10 D3.

### SOURCE

ErbB-3 (C-17) is available as either rabbit (sc-285) or goat (sc-285-G) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of ErbB-3 of human origin.

### PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-285 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin conjugate for flow cytometry, sc-285 PE, 100 tests; as agarose conjugate for immunoprecipitation, sc-285 AC, 500 µg/0.25 ml agarose in 1 ml; and as HRP conjugate for Western blotting, sc-285 HRP, 200 µg/ml.

### APPLICATIONS

ErbB-3 (C-17) is recommended for detection of ErbB-3 p160 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ErbB-3 (C-17) is also recommended for detection of ErbB-3 p160 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ErbB-3 siRNA (h): sc-35327, ErbB-3 siRNA (m): sc-35328, ErbB-3 shRNA Plasmid (h): sc-35327-SH, ErbB-3 shRNA Plasmid (m): sc-35328-SH, ErbB-3 shRNA (h) Lentiviral Particles: sc-35327-V and ErbB-3 shRNA (m) Lentiviral Particles: sc-35328-V.

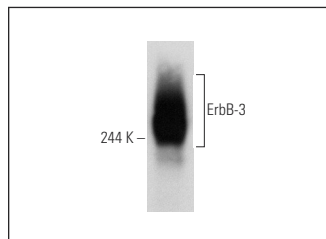
Molecular Weight of ErbB-3: 180 kDa.

Positive Controls: T-47D cell lysate: sc-2293.

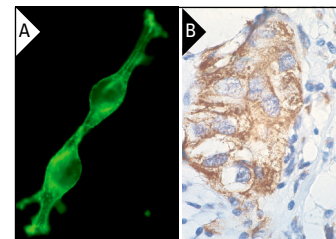
### STORAGE

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

### DATA



ErbB-3 (C-17): sc-285. Western blot analysis of ErbB-3 expression in T-47D whole cell lysate.



ErbB-3 (C-17): sc-285. Immunofluorescence staining of methanol-fixed NIH/3T3 cells transfected with ErbB-3 showing membrane localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing membrane and cytoplasmic staining of epithelial cells (B).

### SELECT PRODUCT CITATIONS

- Chang, H., et al. 1997. Ligands for ErbB-family receptors encoded by a neuregulin-like gene. *Nature* 387: 509-512.
- Riethmacher, D., et al. 1997. Severe neuropathies in mice with targeted mutations in the ErbB3 receptor. *Nature* 389: 725-730.
- Fromont, G., et al. 2012. Biological significance of perineural invasion (PNI) in prostate cancer. *Prostate* 72: 542-548.
- Heering, J., et al. 2012. Loss of the ceramide transfer protein augments EGF receptor signaling in breast cancer. *Cancer Res.* 72: 2855-2866.
- Ma, C., et al. 2012. Lapatinib inhibits the activation of NFκB through reducing phosphorylation of IκB-α in breast cancer cells. *Oncol. Rep.* 29: 812-818.
- Gouttenoire, E.A., et al. 2013. Sh3tc2 deficiency affects neuregulin-1/ErbB signaling. *Glia* 61: 1041-1051.
- Fleck, D., et al. 2013. Dual cleavage of neuregulin 1 type III by BACE1 and ADAM17 liberates its EGF-like domain and allows paracrine signaling. *J. Neurosci.* 33: 7856-7869.
- Jacinto-Alemán, L.F., et al. 2013. erbB expression changes in ethanol and 7,12-dimethylbenz(a)anthracene-induced oral carcinogenesis. *Med. Oral Patol. Oral Cir. Bucal* 18: e325-e331.

### RESEARCH USE

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



Try **ErbB-3 (G-4): sc-7390** or **ErbB-3 (RTJ.2): sc-415**, our highly recommended monoclonal alternatives to ErbB-3 (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **ErbB-3 (G-4): sc-7390**.