**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 (HER-2, ErbB-2), ErbB-3 (HER3) and ErbB-4 (HER4), which form either homodimers or heterodimers upon ligand binding. The gene encoding ErbB-4 is expressed as a full length protein, which produces a short membrane-anchored cytoplasmic domain fragment and a long ectodomain fragment. The short fragment is heavily tyrosine phosphorylated and possesses tyrosine kinase catalytic activity toward an exogenous substrate. Proteolytic cleavage of ErbB-4 is promoted by the binding of heregulin. ErbB-4 is involved in cell proliferation and differentiation and its expression is highest in breast carcinoma cell lines, normal skeletal muscle, heart, pituitary, brain and cerebellum.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: ERBB4 (human) mapping to 2q34; ErbB4 (mouse) mapping to 1 C3.

**SOURCE**

ErbB-4 (HFR1) is a mouse monoclonal antibody raised against amino acids 1249-1264 of ErbB-4 of human origin.

**PRODUCT**

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

**STORAGE**

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

**APPLICATIONS**

ErbB-4 (HFR1) is recommended for detection of ErbB-4 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ErbB-4 siRNA (h): sc-35329, ErbB-4 siRNA (m): sc-35330, ErbB-4 shRNA Plasmid (h): sc-35329-SH, ErbB-4 shRNA Plasmid (m): sc-35330-SH, ErbB-4 shRNA (h) Lentiviral Particles: sc-35329-V and ErbB-4 shRNA (m) Lentiviral Particles: sc-35330-V.

Molecular Weight of ErbB-4 precursor: 180 kDa.

Molecular Weight of ErbB-4 cleaved forms: 80/120 kDa.

Positive Controls: mouse brain extract: sc-2253 or ErbB-4 transfected NIH/3T3 whole cell lysate.

**DATA**

ErbB-4 (HFR1): sc-53280. Western blot analysis of ErbB-4 expression in ErbB-4 transfected NIH/3T3 whole cell lysate.

ErbB-4 (HFR1): sc-53280. Immunoperoxidase staining of formalin fixed, paraffin-embedded human muscle tissue showing cytoplasmic and nuclear staining of myocytes.

**SELECT PRODUCT CITATIONS**


**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.

See ErbB-4 (C-7): sc-8050 for ErbB-4 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.