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. 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 2q31; Erbb4 (mouse) mapping to 1 C3.

SOURCE

ErbB-4 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1176-1198 within a C-terminal cytoplasmic domain of ErbB-4 of human origin.

PRODUCT

Each vial contains 200 µg IgM 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-514327 P, (100 µg peptide in 0.5 ml PBS containing <0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

ErbB-4 (A-5) is recommended for detection of ErbB-4 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).

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-35332-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: MCF7 whole cell lysate: sc-2206, A-431 whole cell lysate: sc-2201 or IMR-32 cell lysate: sc-2409.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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

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

CONJUGATES

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