BACKGROUND

Epidermal growth factors mediate their effects on cell growth through interactions with a cell surface glycoprotein designated EGFR (EGF receptor). Binding of EGF or TGFα to EGFR activates tyrosine-specific protein kinase activity intrinsic to EGFR. The carboxy terminal tyrosine residues on EGFR, Tyr 1092 and Tyr 1173, designated Tyr 1196 in rat, are the major sites of autophosphorylation which occurs as a result of EGF binding. Once activated, EGFR mediates the binding of the phosphotyrosine binding (PTB) domain of GRB2 through direct interactions with Tyr 1092 and Tyr 1110 in human and mouse or Tyr 1109 in rat, and through indirect interactions with Tyr 1173 in the Ras signaling pathway. Tyr 1173 of EGFR also functions as a kinase substrate. Phosphorylation of Tyr 992, Tyr 1092 and Tyr 1110 is required for conformational change in the C-terminal tail of EGFR. Tyr 1092, Tyr 1173 and Tyr 1110 are also designated Tyr 1068, Tyr 1197, and Tyr 1086, respectively.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: EGFR (human) mapping to 7p11.2; Egfr (mouse) mapping to 11A2.

SOURCE

p-EGFR (12A3) is a mouse monoclonal antibody raised against an EGFR phosphopeptide of human origin.

PRODUCT

Each vial contains 50 µg IgG, in 0.5 ml of PBS with <0.1% sodium azide, 0.1% gelatin, PEG and sucrose.

APPLICATIONS

p-EGFR (12A3) is recommended for detection of Tyr 845 phosphorylated EGFR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; non cross-reactive with the non-phosphorylated EGFR nor with unrelated Tyrosine-phosphorylated proteins.


Molecular Weight of p-EGFR: 170 kDa.


STORAGE

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

DATA

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.

SELECT PRODUCT CITATIONS