

EGFR

Reactivity:Human Mouse Rat

Tested applications:WB IHC ICC IP

Recommended Dilution:WB 1:500 - 1:1000 IHC 1:10 - 1:50 ICC 1:10 - 1:50 IP 1:10 - 1:50

Calculated MW:134kDa

Observed MW:Refer to Figures

Immunogen:

A synthetic peptide of human EGFR

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

o

Synonym:

EGFR;ERBB;ERBB1;HER1;PIG61;mENA ;

Catalog #:A1503

Antibody Type:

Polyclonal Antibody

Species:Rabbit

Gene ID:1956

Isotype:IgG

Swiss Prot:P00533

Purity:Affinity purification

For research use only.

Background:

The epidermal growth factor (EGF) receptor is a transmembrane tyrosine kinase that belongs to the HER/ErbB protein family. Ligand binding results in receptor dimerization, autophosphorylation, activation of downstream signaling, internalization, and lysosomal degradation (1,2).

Phosphorylation of EGF receptor (EGFR) at Tyr845 in the kinase domain is implicated in stabilizing the activation loop, maintaining the active state enzyme, and providing a binding surface for substrate proteins (3,4). c-Src is involved in phosphorylation of EGFR at Tyr845 (5).

The SH2 domain of PLC binds at phospho-Tyr992, resulting in activation of PLC-mediated downstream signaling (6). Phosphorylation of EGFR at Tyr1045 creates a major docking site for the adaptor protein c-Cbl, leading to receptor ubiquitination and degradation following EGFR activation (7,8). The GRB2 adaptor protein binds activated EGFR at phospho-Tyr1068 (9). A pair of phosphorylated EGFR residues (Tyr1148 and Tyr1173) provide a docking site for the Shc scaffold protein, with both sites involved in MAP kinase signaling activation (2). Phosphorylation of EGFR at specific serine and threonine residues attenuates EGFR kinase activity. EGFR carboxy-terminal residues Ser1046 and Ser1047 are phosphorylated by CaM kinase II; mutation of either of these serines results in upregulated EGFR tyrosine autophosphorylation (10).

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