

EGFR monoclonal antibody

Catalog: MB65918

Host: Mouse

Reactivity: Human

Background:

The epidermal growth factor (EGF) receptor is a trans-membrane 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. 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. c-Src is involved in phosphorylation of EGFR at Tyr845. The SH2 domain of PLC γ binds at phospho-Tyr992, resulting in activation of PLC γ -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. The GRB2 adaptor protein binds activated EGFR at phospho-Tyr1068. 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. 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.

Product:

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 175 kDa

Swiss-Prot:

P00533

Purification&Purity:

The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific im-

munogen and the purity is > 95% (by SDS-PAGE).

Applications:

WB (1/1000 - 1/3000), IHC (1/200 - 1/500), IF/ICC (1/100 - 1/200)

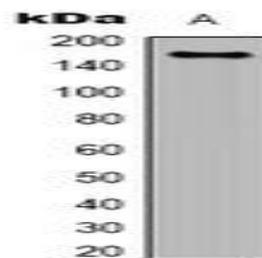
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

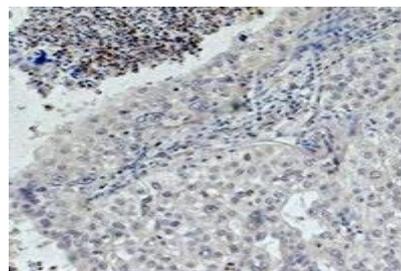
Specificity:

Recognizes endogenous levels of EGFR protein.

DATA:



Western blot analysis of EGFR expression in HeLa (A) whole cell lysates.



Immunohistochemical analysis of EGFR staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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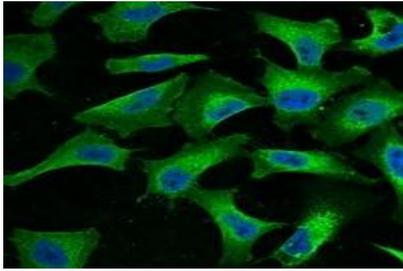
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Immunofluorescent analysis of EGFR staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a FITC-conjugated second-

ary antibody (green) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Note:

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

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