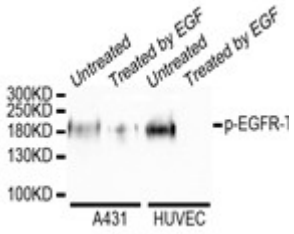
Product name:	Phospho-EGFR (T669)
Cat number:	MAB-94205
Conjugate:	Unconjugated
Size:	100 ug
Clone:	D2F1
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Reactivity:	Hu
Applications:	Western Blotting 1:1000
Molecular Weight:	175 kDa
Purification:	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr693 of human EGFR protein.
Form:	liquid
Buffer:	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage:	Store at –20°C. Avoid freeze / thaw cycles.

Background:

The epidermal growth factor (EGF) receptor is a 170 kDa transmembrane tyrosine kinase that belongs to the HER/ErbB protein family. Ligand binding results in receptor dimerization, autophosphorylation, activation of downstream signaling 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 PLCγ binds at phospho-Tyr992, resulting in activation of PLCγ-mediated downstream signaling (6). Phosphorylation of EGFR at Tyr1045 creates a major dock¬ing site for c-Cbl, an adaptor protein that leads 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 residues (Tyr1148 and Tyr1173) provides 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 to either of these serines results in upregulated EGFR tyrosine autophosphorylation (10). Thr669 (equivalent to Thr693 of human EGFR) is phosphorylated by p38 MAP kinase following EGF stimulation (11). Phosphorylation of EGFR at Thr669 may be involved in regulation of ligand induced receptor internalization through interaction with specific downstream EGFR tyrosine kinase substrates (11).Phospho-EGFR (Thr669) (D2F1) Rabbit mAb detects endogenous levels of EGFR proteins only when phosphorylated at Thr669. The antibody does not cross-react with other phosphorylated receptor tyrosine kinases.



Western blot analysis of extracts of various cell lines, using Phospho-EGFR (Tyr669) monoclonal antibody.