

Background

The epidermal growth factor receptor (EGFR) is a transmembrane glycoprotein with an extracellular ligand-binding domain and a cytoplasmic domain with intrinsic tyrosine kinase activity. The cytoplasmic domain has a C-terminal region with multiple autophosphorylation sites (Tyr-992, 1068, 1086, 1148, and 1173). These sites are important for downstream signaling and rapid internalization. In addition, EGFR activation leads to c-Src mediated phosphorylation of Tyr-845 and Tyr-1101. The former site is required for mitogenic responses to EGFR activation, while the latter may be an SH2 binding site. Phosphorylation of EGFR on serine and threonine residues is thought to represent a mechanism for regulation of receptor kinase activity and internalization. These sites include a PKC site (Thr-654), CAMKII sites (Ser-1046, 1047, 1057, and 1142), and constitutively phosphorylated sites (Ser-967 and Ser-1002). Thus, the regulation of EGFR activity involves a complex series of phosphorylation events at multiple sites throughout the intracellular portion of the receptor.

Background References

- Carpenter, G. (2000) *Bioessays* 22:697.
Boeri Erba, E. et al. (2005) *Mol. Cell. Prot.* 4:1107.
Morandell, S. et al. (2008) *Proteomics*. 8(21):4383.

Applications

Blocking 1:1000
ELISA 50 ng/well

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Specificity

The peptide is recommended for use in ELISA and antibody-blocking experiments in Western blot and immunocytochemistry applications.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Peptide Sequence

Unphosphorylated EGFR (Ser-1142) synthetic peptide corresponding to amino acid residues surrounding serine 1142 of human EGFR (ErbB-1). This human EGFR sequence has high homology with rat and mouse EGFR, and is not conserved in other ErbB family members.

Buffer and Storage

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.
Store at -20°C. Stable for 1 year.

Related Products

- EP1871 EGFR (a.a. 961-972) Rabbit Polyclonal
EP1931 EGFR (Ser-1142), phospho-specific Rabbit Polyclonal
EP1911 EGFR (Ser-967), phospho-specific Rabbit Polyclonal
EM1991 EGFR (Tyr-1101), phospho-specific Mouse Monoclonal

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