

# phospho-EGFR (Ser-1142) Peptide

Cat. # EX1935

Size 50 µg

## **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.

## **References**

Carpenter, G. (2000) Bioessays 22:697.  
Boeri Erba, E. et al. (2005) Mol. Cell. Prot. 4:1107.

## **Peptide Sequence:**

Phospho-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.

## **Applications:**

WB 1:1,000                      ICC 1:500  
ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.  
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.  
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

## **Specificity:**

The peptide is specifically recognized by EGFR (Ser -1142) antibody (EP1931) in ELISA, and has been shown to block the reactivity of EP1931 in Western blot and immunocytochemistry.

## **Related Products:**

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

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

www.ecmbiosciences.com  
telephone: 859-879-2075  
toll-free: 1-800-859-8202  
tech: info@ecmbiosciences.com

**ECM**Biosciences

Rev 7/30/2007