

Phospho-EGF Receptor (Tyr1173) Blocking Peptide

✓ 100 µg



Orders ■ 877-616-CELL (2355)
orders@cellsignal.com

Support ■ 877-678-TECH (8324)
info@cellsignal.com

Web ■ www.cellsignal.com

rev. 05/24/17

For Research Use Only. Not For Use In Diagnostic Procedures.

Description: This peptide is used to block Phospho-EGF Receptor (Tyr1173) (53A5) Rabbit mAb #4407 reactivity.

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 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 (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).

Quality Control: The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Phospho-EGF Receptor (Tyr1173) (53A5) Rabbit mAb #4407 signal in peptide dot blot.

Directions for Use: Use as a blocking reagent to evaluate the specificity of antibody reactivity in peptide dot blot protocols. Recommended antibody dilutions can be found on the Phospho-EGF Receptor (Tyr1173)(53A5) Rabbit mAb #4407 data sheet.

Background References:

- (1) Hackel, P.O. et al. (1999) *Curr. Opin. Cell Biol.* 11, 184–189.
- (2) Zwick, E. et al. (1999) *Trends Pharmacol. Sci.* 20, 408–412.
- (3) Cooper, J.A. and Howell, B. (1993) *Cell* 73, 1051–1054.
- (4) Hubbard, S.R. et al. (1994) *Nature* 372, 746–754.
- (5) Biscardi, J.S. et al. (1999) *J. Biol. Chem.* 274, 8335–8343.
- (6) Emllet, D.R. et al. (1997) *J. Biol. Chem.* 272, 4079–4086.
- (7) Levkowitz, G. et al. (1999) *Mol. Cell* 4, 1029–1040.
- (8) Ettenberg, S.A. et al. (1999) *Oncogene* 18, 1855–1866.
- (9) Rojas, M. et al. (1996) *J. Biol. Chem.* 271, 27456–27461.
- (10) Feinmesser, R.L. et al. (1999) *J. Biol. Chem.* 274, 16168–16173.

Entrez Gene ID #1956

UniProt ID #P00533

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. 1% DMSO. Store at -20°C.

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.