

p-EGFR (Tyr 845): sc-101669

BACKGROUND

Epidermal growth factors mediate their effects on cell growth through interactions with a cell surface glycoprotein designated EGFR (EGF receptor). Binding of EGF or TGF α to EGFR activates tyrosine-specific protein kinase activity intrinsic to EGFR. The carboxy terminal tyrosine residues on EGFR, Tyr 1092 and Tyr 1173, designated Tyr 1196 in rat, are the major sites of autophosphorylation which occurs as a result of EGF binding. Once activated, EGFR mediates the binding of the phosphotyrosine binding (PTB) domain of GRB2 through direct interactions with Tyr 1092 and Tyr 1110 in human and mouse or Tyr 1109 in rat, and through indirect interactions with Tyr 1173 in the Ras signaling pathway. Tyr 1173 of EGFR also functions as a kinase substrate. Phosphorylation of Tyr 992, Tyr 1092 and Tyr 1110 is required for conformational change in the C-terminal tail of EGFR. Tyr 1092, Tyr 1173 and Tyr 1110 are also designated Tyr 1068, Tyr 1197, and Tyr 1086, respectively.

CHROMOSOMAL LOCATION

Genetic locus: EGFR (human) mapping to 7p11.2; Egfr (mouse) mapping to 11 A2.

SOURCE

p-EGFR (Tyr 845) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 845 phosphorylated EGFR of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

p-EGFR (Tyr 845) is recommended for detection of Tyr 845 phosphorylated EGFR of human origin, correspondingly phosphorylated Tyr 847 of mouse origin and correspondingly phosphorylated Tyr 846 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for EGFR siRNA (h): sc-29301, EGFR siRNA (m): sc-29302, EGFR shRNA Plasmid (h): sc-29301-SH, EGFR shRNA Plasmid (m): sc-29302-SH, EGFR shRNA (h) Lentiviral Particles: sc-29301-V and EGFR shRNA (m) Lentiviral Particles: sc-29302-V.

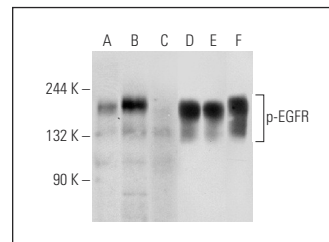
Molecular Weight of p-EGFR: 170 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Western blot analysis of EGFR phosphorylation in untreated (A, D), EGF treated (B, E) and EGF and lambda protein phosphatase (sc-200312A) treated (C, F) A-431 whole cell lysates. Antibodies tested include p-EGFR (Tyr 845): sc-101669 (A, B, C) and EGFR (1005): sc-03 (D, E, F).

SELECT PRODUCT CITATIONS

- Gravina, G.L., et al. 2007. Surgical and biologic outcomes after neoadjuvant bicalutamide treatment in prostate cancer. *Urology* 70: 728-733.
- Lee, E.J., et al. 2010. Capsiate inhibits ultraviolet B-induced skin inflammation by inhibiting Src family kinases and epidermal growth factor receptor signaling. *Free Radic. Biol. Med.* 48: 1133-1143.
- Li, Q.Q., et al. 2011. Involvement of NF κ B/miR-448 regulatory feedback loop in chemotherapy-induced epithelial-mesenchymal transition of breast cancer cells. *Cell Death Differ.* 18: 16-25.
- Zhi, X., et al. 2012. Potential prognostic biomarker CD73 regulates epidermal growth factor receptor expression in human breast cancer. *IUBMB Life* 64: 911-920.
- Fernández-Martínez, A.B. and Lucio Cazaña, F.J. 2013. Epidermal growth factor receptor transactivation by intracellular prostaglandin E2-activated prostaglandin E2 receptors. Role in retinoic acid receptor- β up-regulation. *Biochim. Biophys. Acta* 1833: 2029-2038.


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Try **p-EGFR (12A3): sc-57542**, our highly recommended monoclonal alternative to p-EGFR (Tyr 845).