

p-EGFR (Tyr 1173): sc-101668

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 1173) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 1173 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.

APPLICATIONS

p-EGFR (Tyr 1173) is recommended for detection of Tyr 1173 phosphorylated EGFR of human and mouse origin and correspondingly phosphorylated Tyr 1172 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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: A-431 whole cell lysate: sc-2201, SK-N-SH cell lysate: sc-2410 or Hep G2 cell lysate: sc-2227.

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

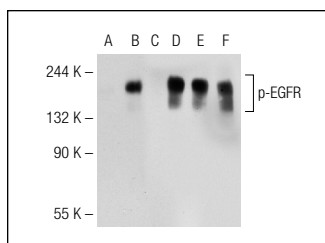
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

RESEARCH USE

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

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 1173): sc-101668 (A, B, C) and EGFR (1005): sc-03 (D, E, F).



p-EGFR (Tyr 1173): sc-101668. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing membrane staining.

SELECT PRODUCT CITATIONS

- Bionda, C., et al. 2008. Differential regulation of cell death in head and neck cell carcinoma through alteration of cholesterol levels in lipid rafts microdomains. *Biochem. Pharmacol.* 75: 761-772.
- Liu, T., et al. 2011. Combinatorial effects of lapatinib and rapamycin in triple-negative breast cancer cells. *Mol. Cancer Ther.* 10: 1460-1469.
- Das, T., et al. 2011. Augmented stress-responsive characteristics of cell lines in narrow confinements. *Integr. Biol.* 3: 684-695.
- Melnick, M., et al. 2012. Human cytomegalovirus and mucoepidermoid carcinoma of salivary glands: cell-specific localization of active viral and oncogenic signaling proteins is confirmatory of a causal relationship. *Exp. Mol. Pathol.* 92: 118-125.
- Gong, J.H., et al. 2012. Pingyangmycin downregulates the expression of EGFR and enhances the effects of cetuximab on esophageal cancer cells and the xenograft in athymic mice. *Cancer Chemother. Pharmacol.* 69: 1323-1332.
- Kandala, P.K., et al. 2012. Blocking epidermal growth factor receptor activation by 3,3'-diindolylmethane suppresses ovarian tumor growth *in vitro* and *in vivo*. *J. Pharmacol. Exp. Ther.* 341: 24-32.
- Sun, W., et al. 2012. A 1.8-GHz radiofrequency radiation induces EGF receptor clustering and phosphorylation in cultured human amniotic (FL) cells. *Int. J. Radiat. Biol.* 88: 239-244.
- Glisic, D., et al. 2012. A novel cross-talk between endothelin and ErbB receptors controlling glutamate transporter expression in astrocytes. *J. Neurochem.* 122: 844-855.



Try **p-EGFR (9H2): sc-57545**, our highly recommended monoclonal alternative to p-EGFR (Tyr 1173).