SANTA CRUZ BIOTECHNOLOGY, INC.

p-EGFR (Tyr 1173): sc-12351

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 TGFα 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 available as either goat (sc-12351) or rabbit (sc-12351-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 1173 phosphorylated EGFR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12351 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-EGFR (Tyr 1173) is recommended for detection of Tyr 1173 phosphorylated EGFR (also designated as Tyr 1197) of human and mouse origin and Tyr 1196 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-EGFR (Tyr 1173) is also recommended for detection of correspongdingly phosphorylated EGFR in additional species, including equine, canine, bovine, porcine and avian.

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.

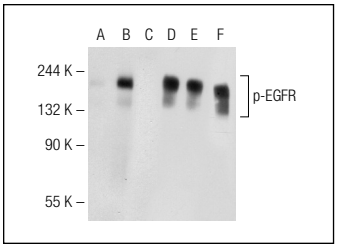
STORAGE

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

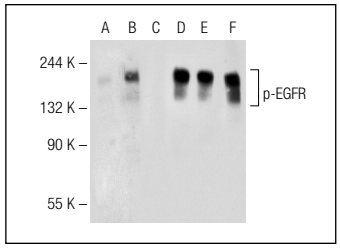
RESEARCH USE

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

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-12351 (**A**,**B**,**C**) and EGFR (1005): sc-03 (**D**,**E**,**F**).



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)-R: sc-12351-R (**A**,**B**,**C**) and EGFR (1005): sc-03 (**D**,**E**,**F**).

SELECT PRODUCT CITATIONS

1. Semino, C.E., et al. 2006. Autocrine EGF receptor activation mediates endothelial cell migration and vascular morphogenesis induced by VEGF under interstitial flow. Exp. Cell Res. 312: 289-298.
2. Memon, A.A., et al. 2011. Calcium-induced apoptosis is delayed by HER1 receptor signalling through the Akt and PLCγ pathways in bladder cancer cells. Scand. J. Clin. Lab. Invest. 71: 45-51.
3. Shupe, J., et al. 2011. Regulation of Sertoli-germ cell adhesion and sperm release by FSH and nonclassical testosterone signaling. Mol. Endocrinol. 25: 238-252.
4. Hara, T., et al. 2011. PKCη promotes a proliferation to differentiation switch in keratinocytes via upregulation of p27Kip1 mRNA through suppression of JNK/c-Jun signaling under stress conditions. Cell Death Dis. 2: e157.
5. Englert, N.A., et al. 2011. Persistent and non-persistent changes in gene expression result from long-term estrogen exposure of MCF-7 breast cancer cells. J. Steroid Biochem. Mol. Biol. 123: 140-150.
6. Santolla, M.F., et al. 2012. G protein-coupled estrogen receptor mediates the up-regulation of fatty acid synthase induced by 17β-estradiol in cancer cells and cancer-associated fibroblasts. J. Biol. Chem. 287: 43234-43245.
7. Lappano, R., et al. 2012. MIBE acts as antagonist ligand of both estrogen receptor α and GPER in breast cancer cells. Breast Cancer Res. 14: R12.