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 1109, respectively. EGFR (also designated as Tyr1196) of human and mouse origin and Tyr1109 in rat, and through indirect interaction with Tyr1173 in the Ras signaling pathway. Tyr1092, Tyr1173 and Tyr1110 are also designated Tyr1068, Tyr1197, and Tyr1109, 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 correspondingly 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.

**Background**

**Data**

Western blot analysis of EGFR phosphorylation in untreated (A, D), EGF treated (B, E) and EGFR 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).

**Select Product Citations**


