

p-Tyr (PY350): sc-18182

BACKGROUND

The critical involvement of protein tyrosine kinases in signal transduction pathways is well established. These kinases can be divided into two major groups, including the receptor tyrosine kinases and the non-receptor type kinases, of which the Src kinases are the prototypical members. Src kinases are generally associated with the internal portion of the plasma membrane and may function as signal transducers in association with surface receptors that lack an intracellular catalytic domain. The second major group of tyrosine kinases are the receptor tyrosine kinases. Over fifty members of this group of these receptors, belonging to fourteen families, have been identified to date. Ligand-induced tyrosine phosphorylation of such receptors induces receptor dimerization and subsequent autophosphorylation of specific individual phosphotyrosine residues located within their cytoplasmic domains, which serve as binding sites that interact with specific cytoplasmic molecules. Monoclonal antibodies to phosphotyrosine are valuable for the characterization and purification of proteins containing phosphotyrosyl residues, and are used extensively for these purposes.

REFERENCES

1. Friedman, B., et al. 1984. Tumor promoters block tyrosine specific phosphorylation of epidermal growth factor receptor. *Proc. Natl. Acad. Sci. USA* 81: 3034-3038.
2. Foulkes, J.G., et al. 1985. Purification and characterization of a protein tyrosine kinase encoded by the Abelson murine leukemia virus. *J. Biol. Chem.* 260: 8070-8077.

SOURCE

p-Tyr (PY350) is an affinity purified rabbit polyclonal designed to specifically detect phosphorylated tyrosine residues.

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-18182 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-18182 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

p-Tyr (PY350) is recommended for detection of phosphotyrosine containing proteins 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); non cross-reactive with phosphoserine or phosphothreonine.

Positive Controls: A-431 whole cell lysate: sc-2201 or A-431-EGF whole cell lysate: sc-2202.

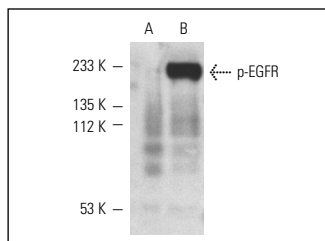
RESEARCH USE

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

STORAGE

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

DATA



p-Tyr (PY350): sc-18182. Western blot analysis of EGFR phosphorylation in A-431 (A) and EGF-treated A-431 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, J., et al. 2004. Serine-threonine kinases and transcription factors active in signal transduction are detected at high levels of phosphorylation during mitosis in preimplantation embryos and trophoblast stem cells. *Reproduction* 128: 643-654.
2. Welters, H.J., et al. 2008. The protein tyrosine phosphatase-BL, modulates pancreatic β cell proliferation by interaction with the Wnt signalling pathway. *J. Endocrinol.* 197: 543-552.
3. Málaga-Trillo, E., et al. 2009. Regulation of embryonic cell adhesion by the prion protein. *PLoS Biol.* 7: e55.
4. Schneider, L., et al. 2010. Directional cell migration and chemotaxis in wound healing response to PDGF-AA are coordinated by the primary cilium in fibroblasts. *Cell. Physiol. Biochem.* 25: 279-292.
5. Tsang, S.M., et al. 2010. Desmoglein 3, via an interaction with E-cadherin, is associated with activation of Src. *PLoS ONE* 5: e14211.
6. Mouguelar, V.S., et al. 2011. The integrin-binding motif RGDS induces protein tyrosine phosphorylation without activation in *Bufo arenarum* (Amphibia) oocytes. *Reproduction* 141: 581-593.
7. Scarpi, D., et al. 2012. Low molecular weight, non-peptidic agonists of TrkA receptor with NGF-mimetic activity. *Cell Death Dis.* 3: e389.
8. Zakharchenko, O., et al. 2013. A role of TGF β 1 dependent 14-3-3 σ phosphorylation at Ser69 and Ser74 in the regulation of gene transcription, stemness and radioresistance. *PLoS ONE* 8: e65163.



Try **p-Tyr (PY99): sc-7020** or **p-Tyr (PY20): sc-508**, our highly recommended monoclonal alternatives to p-Tyr (PY350). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **p-Tyr (PY99): sc-7020**.