



p-Tyr (PY72): sc-57577

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 14 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

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- Lemmon, M.A., et al. 1994. Regulation of signal transduction and signal diversity by receptor oligomerization. *Trends Biochem. Sci.* 19: 459-463.
- Friedman, B., et al. 1984. Tumor promoters block tyrosine specific phosphorylation of epidermal growth factor receptor. *Proc. Natl. Acad. Sci. USA* 81: 3034-3038.
- 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.
- Daniels, T.O., et al. 1985. Purification of the platelet-derived growth factor receptor using an anti-phosphotyrosine antibody. *Proc. Natl. Acad. Sci. USA* 82: 2684-2687.

SOURCE

p-Tyr (PY72) is a mouse monoclonal antibody raised against phosphotyrosine.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

p-Tyr (PY72) is recommended for detection of phosphorylated tyrosine 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Positive Controls: A-431 whole cell lysate: sc-2201, normal human tonsil or A-431 + EGF whole cell lysate: sc-2202.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° 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.