



FabGennix Inc.
INTERNATIONAL

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Antibodies to Protein Phosphatases

Anti-Protein Phosphatase 2A Catalytic subunit (PP2Ac) antibodies (PP2Ac-101AP)

PP1 and PP2A are members of the protein serine/threonine phosphatases (PPs) family and their activities have been implicated in many cellular signal transduction processes including the steroid synthesis regulation via hormonally regulated cAMP, regulation of insulin dependent glucose uptake and glycogen synthesis, apoptotic activity in chronic lymphocytic leukemia (CLL) via de-phosphorylation of pro-apoptotic BH3-only Bcl-2 family members etc. (1, 2). The protein phosphatase 2A (PP2A) holoenzyme is composed of one catalytic C subunit, one regulatory/scaffolding A subunit, and one regulatory B subunit. The native core enzyme consists of A and C subunits. The A and C subunits are found in two closely related isoforms, alpha and beta. The regulatory B subunits belongs to four distinct/weakly related families designated as B, B', B'', and B'''. The B family has multiple variants. The existence of two A and two C subunit isoforms allows the PP2A complex to be expressed in four core enzymes (A α /C α ; A α /C β ; A β /C α ; A β /C β). Enzymatically, various holoenzymes are identical but their expression and subcellular localization during early embryonic development have been distinct suggesting they might have different functions (3).

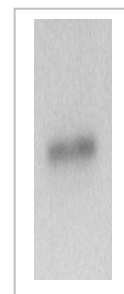
Understanding the mechanisms that regulate cell migration is important for developing novel therapeutic drugs for the treatment of metastasis and for enhanced wound healing. Inhibitors of PP2A slowed down the de-phosphorylation of extracellular-signal related kinase (ERK) in keratinocytes in response to beta adrenergic receptor activation, which alters the migration rate of these cells. The PP2A is also an excellent therapeutic target for development of novel anticancer agents (Cantharimides) such as, norcantharidin, which exhibited a broad spectrum of anti-cancer activity (4) and for enhanced wound healing by altering cellular migration.

The PP2Ac-selective antibodies were generated against purified human kidney protein p phosphatase 2A catalytic subunit. The antibodies to PP2Ac are affinity purified over immobilized antigen based chromatography. The purified antibodies are stabilized in antibody stabilization buffer containing preservatives. FabGennix Int. Inc., will also provide partially purified human PP2Ac in-ready-to-use buffer for easy identification of P65PAK protein on Westerns. Other related antibodies that are carried by FabGennix Int. Inc. include auto activated proteins kinase, various tyrosine kinases and phospho-specific MER tyrosine kinases. FabGennix International Inc. also carries a number of antibodies to various protein phosphatases and their inhibitors. *FabGennix Inc.* will also conjugate antibodies with fluorescent probes upon request at a reasonable cost.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	price
PP2Ac-101AP	Rabbit	Affinity purified antibodies	R, M, H, *C, *monk	50 ug	205
PC-PP2Ac	Human	Western blot controls	n/a	5 appl.	195

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

- Immunogen:** Purified bovine kidney Protein Phosphatase 2A (catalytic subunit) PP2Ac
- Concentration:** PP2Ac-101AP Ig concentration 1-1.25 mg/ml in 50% antibody stabilization buffer.
- Applications:** Antibody PP2Ac-101AP is ideal for IMM/WB applications for detection of ?auto activated protein kinase in various tissues of several animal species. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions. Laboratory. Western blotting: > 1:250; IMM: not recommended
- Reactivity:** This antibody detects a single band of approximately 36 kDa of PP2A in our Western Blot positive control for PP2Ac sample (Cat # PC-PP2Ac). The antibody does not cross reacts with other proteins from the protein kinase family or with other proteins.
- Protocols:** Standard protocol for various applications (WB; IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc. strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.
- Form/Storage:** The antiserum is supplied in antibody stabilization buffer with 0.02% thimerosal or merthiolate. The affinity-purified antibodies are purified on antigen-sepharose affinity column and supplied as 1-1.25 mg/ml IgG in antibody stabilization buffer containing preservatives. For long-term storage of antibodies, store at -20°C. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45 μ filter after every use for long-term storage.
- References:**



Western blot using PC-PP2Ac & PP2Ac-101AP (1:250).

- Zhou J, Pham HT, Walter G. J Biol Chem 2003; 278: 8617-22.
- Pullar CE, Chen J, Isseroff R. J Biol Chem 2003 Apr 14;
- Moon EY, Lerner A., Blood 2003 May 15;101(10):4122-30
- McCluskey A, Ackland SP, Gardiner E, Walkom CC, Sakoff JA., Anticancer Drug Des 2001; 16:291-303.

For users who may require large amounts of P65PAK-101AP, please enquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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