

New Item

INTERNATIONAL

cAMP-dependent phosphodiesterase Type 2A-antibodies (PD2A-100P; PD2A-101AP; PD2A-110P and PD2A-112AP)

Cyclic nucleotides are important intracellular second messengers which play important role variety of signal transduction process. The cyclic nucleotides are hydrolyzed and compartmentalized by a family of enzymes called phosphodiesterases. One of the many phosphodiesterases that compartmentalized and hydrolyze cAMP and cGMP in to AMP and GMP respectively are phosphodiesterase type 2. There are two member of PDE2A gene are cloned and designated as PD2A and PDE2B (Rascon et. al., 2002). Each of the PDE2A and PDE2B genes are 2793 Bases and 930 amino acids with an apparent MW of 100 kDa. The catalytic domain of PDE2A is homologous to all other 11 PDE family members. The PDE2A has specificity for cAMP with Km of 2.4 uM and its activity is modulated by the presence of cGMP. In contrast, the PDE2B does not hydrolyze cGMP nor its activity is altered by the presence of cGMP. Western blot analyses of PDE2A reveals a variety of tissues including neocortex, cerebellum, heart, kidney lungs, pulmonary artery and skeletal muscle (Sadhu et. al., 2002). The PDE2A expression was evident in venous arterial endothelial cells but not in arterial endothelial cells (Sadhu et. al., 1999). The PDE2A expression was also noted in corpus cavernosum along with a wide repertoire of other PDEs enzymes (Kuthe et. al., 1999).

FabGennix Inc. also provides antibodies to other PDE family members. The PDE-selective antibodies are PDE-selective, family subtype-selective and family-subtype-variant selective antibodies for detailed analyses of cyclic nucleotide signaling pathways. We have generated two PDE2A-selective antibodies (PD2A-101AP, FITC-PDE2A and Biotin-PDE2A) that were generated from epitopes close to C-terminal regions. The polyclonal antibody (PD2A-101AP) labels a 103 kDa PDE2A protein in rat brain and other tissues. The PDE2A-specific antiserum has no cross reactivity against PDE2B or with other PDE family members tested so far.

The PDE2A-selective antibodies (PD2A-101AP) was generated using cyclic peptide methodology that results in higher titer and specificity. PDE2A-selective antibody is also available in affinity purified form for confocal, Western blotting and immunocytochemical analyses. The affinity purified antibodies are also conjugated to FITC and Biotin for direct applications in IHC FACS assay. *FabGennix Inc.* will also conjugate antibodies with enzymes, fluorescent probes upon request at extra charge.

Catalog #	Host species	Nature	Cross reactivity	Quantity	Price (US \$)
PD2A-101AP	Rabbit	Affinity Purified near C-terminal Ab	R, M, H	100 ug	235
FITC-PD2A	Rabbit	FITC-conjugated PDE2A antibody	R, M, H	100ug	295
Biotin-PD2A	Rabbit	Biotin-PDE2A conjugated antibody	R, M, H	100ug	295
PC-PD2A	Protein	WB positive control	R, M, H	5 applications	195
P-PD2A	Antigen	Antigenic peptide for PDE2A	n/a	250 ug	115

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

Immunogen: Two synthetic peptide (Near C-terminus, common to PDE2A variants)

Concentration: PD2A-101AP, FITC-PDE2A and Biotin-PDE2A IgG concentration 0.7-0.75 mg/ml in antibody stabilization buffer containing preservatives.

Applications: Antibody PD2A-100P/PD2A-110P and PD2A-101AP/112AP are ideal for IMM/ PDE2A activity measurement and screening of various PDE2A enzyme variants in sample. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay in his/her laboratory. WB > 1:500 IMM & i.p pull-down assays: > 1:250

Reactivity: This antibody detects a 95-97 kDa PDE2A protein from rat brain.

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 0.6-0.75 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 0.45µ filter after every use for long-term storage.

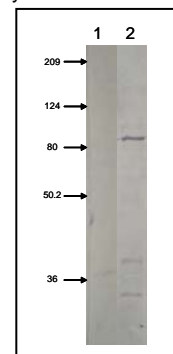


Figure 1: Ln 1: Pre immune serum; Ln 2: PC-PD2A and 1:500 diluted PD2A-100P in antibody dilution buffer.

References:

1. Rascon A., Soderling SH, Schaefer and Beavo JA. Proc. Natl. Acad. Sci. USA 2002; 299, 4714-4719.
2. Sadhu K., Hanseley, K, V. L. Florio, and Folda, SA. J. Histochem and Cytochem. 47, 895-906, 1999.
3. Kuthe A., Widenroth, A., Magret J. H., et. al., J. Urol. 2001. 165, 280-283.
4. Farooqui S. M. Hamdi A., Brock J., Prasad C. J. Neurochem 57;1363-369, 1991.

Testimonials:

1. "PS: We just tested your PDE2 antibody (N-terminal) with our human recombinant PDE2A3 and it worked very well, a quite strong band at 105kDa appeared. We will next try HUVEC extracts (which contains PDE2)" . Dr. Hermann Tenor, AltanaPharma (Byk Gulden Institute), Germany