SANTA CRUZ BIOTECHNOLOGY, INC.

PDE3B (H-300): sc-20793

BACKGROUND

Phosphodiesterases (PDE, also designated cyclic nucleotide phosphodiesterase) are important for the downregulation of the intracellular level of the second messenger cyclic adenosine monophosphate (cAMP) by hydrolyzing cAMP to 5'AMP. Phosphodiesterase type 3 isoforms, PDE3A and 3B, are expressed primarily in cardiovascular tissue and adipose tissue, respectively. PDE3A, is found in myocardium and platelets and PDE3B is found in lymphocytes. The PDE7A1 (HCP1) isozyme and the PDE7A2 proteins, alternate splice products of PDE7A, are highly expressed in skeletal muscle. PDE7B is most highly expressed in pancreas. The PDE family contains proteins that serve tissue-specific roles in regulation of lipolysis, glycogenolysis, myocardial contractility, and smooth muscle relaxation.

CHROMOSOMAL LOCATION

Genetic locus: PDE3B (human) mapping to 11p15.2; Pde3b (mouse) mapping to 7 F1.

SOURCE

PDE3B (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of PDE3B 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.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

PDE3B (H-300) is recommended for detection of PDE3B of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PDE3B siRNA (h): sc-41594, PDE3B siRNA (m): sc-41595, PDE3B shRNA Plasmid (h): sc-41594-SH, PDE3B shRNA Plasmid (m): sc-41595-SH, PDE3B shRNA (h) Lentiviral Particles: sc-41594-V and PDE3B shRNA (m) Lentiviral Particles: sc-41595-V.

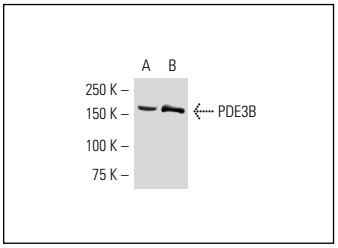
Molecular Weight of PDE3B: 135 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or 3T3-L1 cell lysate: sc-2243.

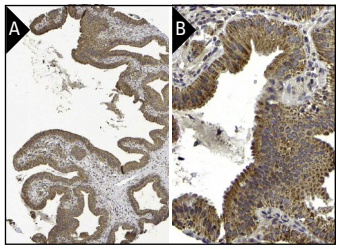
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PDE3B (H-300): sc-20793. Western blot analysis of PDE3B expression in Jurkat (**A**) and 3T3-L1 (**B**) whole cell lysates.



PDE3B (H-300): sc-20793. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Wang, X., et al. 2010. Cyclic nucleotide signaling in polycystic kidney disease. Kidney Int. 77: 129-140.
2. Hadad, S., et al. 2011. Evidence for biological effects of metformin in operable breast cancer: a pre-operative, window-of-opportunity, randomized trial. Breast Cancer Res. Treat. 128: 783-794.
3. Tsukahara, T., et al. 2011. Cyclic phosphatidic acid influences the expression and regulation of cyclic nucleotide phosphodiesterase 3B and lipolysis in 3T3-L1 cells. Biochem. Biophys. Res. Commun. 404: 109-114.
4. Sprague, R.S., et al. 2011. A selective phosphodiesterase 3 inhibitor rescues low PO2-induced ATP release from erythrocytes of humans with type 2 diabetes: implication for vascular control. Am. J. Physiol. Heart Circ. Physiol. 301: H2466-H2472.
5. Oliva, A.A., et al. 2012. Phosphodiesterase isoform-specific expression induced by traumatic brain injury. J. Neurochem. 123: 1019-1029.