SANTA CRUZ BIOTECHNOLOGY, INC.

PDE3B (C-20): sc-11838

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

REFERENCES

1. Bloom, T.J., et al. 1996. Identification and tissue-specific expression of PDE7 phosphodiesterase splice variants. Proc. Natl. Acad. Sci. USA 93: 14188-14192.
2. Han, P., et al. 1997. Alternative splicing of the high affinity cAMP-specific phosphodiesterase (PDE7A) mRNA in human skeletal muscle and heart. J. Biol. Chem. 272: 16152-16157.
3. Sheth, S.B., et al. 1997. Cyclic AMP phosphodiesterases in human lymphocytes. Br. J. Haematol. 99: 784-789.
4. Gantner, F., et al. 1998. Phosphodiesterase profile of human B lymphocytes from normal and atopic donors and the effects of PDE inhibition on B cell proliferation. Br. J. Pharmacol. 123: 1031-1038.

CHROMOSOMAL LOCATION

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

SOURCE

PDE3B (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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.

Blocking peptide available for competition studies, sc-11838 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 (C-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

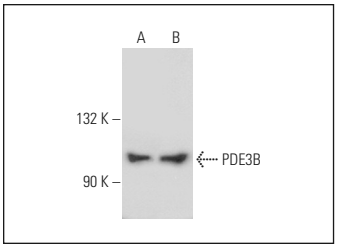
PDE3B (C-20) is also recommended for detection of PDE3B in additional species, including equine and avian.

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, K-562 whole cell lysate: sc-2203 or 3T3-L1 cell lysate: sc-2243.

DATA



PDE3B (C-20): sc-11838. Western blot analysis of PDE3B expression in Jurkat (**A**) and K-562 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Sahu, A. 2003. Leptin signaling in the hypothalamus: emphasis on energy homeostasis and leptin resistance. Front. Neuroendocrinol. 24: 225-253.
2. Baxendale, R.W. and Fraser, L.R. 2005. Mammalian sperm phosphodiesterases and their involvement in receptor-mediated cell signaling important for capacitation. Mol. Reprod. Dev. 71: 495-508.
3. Gavin, M.A., et al. 2007. FOXP3-dependent programme of regulatory T-cell differentiation. Nature 445: 771-775.
4. Palmer, D., et al. 2007. Protein kinase A phosphorylation of human phosphodiesterase 3B promotes 14-3-3 protein binding and inhibits phosphatase-catalyzed inactivation. J. Biol. Chem. 282: 9411-9419.