SANTA CRUZ BIOTECHNOLOGY, INC.

PDE3B (N-20): sc-11835

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. and Beavo, J.A. 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. Fisher, D.A., et al. 1998. Isolation and characterization of PDE8A, a novel human cAMP-specific phosphodiesterase. Biochem. Biophys. Res. Commun. 246: 570-577.
5. 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.
6. Liu, H. and Maurice, D.H. 1998. Expression of cyclic GMP-inhibited phosphodiesterases 3A and 3B (PDE3A and PDE3B) in rat tissues: differential subcellular localization and regulated expression by cyclic AMP. Br. J. Pharmacol. 125: 1501-1510.

CHROMOSOMAL LOCATION

Genetic locus: PDE3B (human) mapping to 11p15.2.

SOURCE

PDE3B (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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-11835 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.

APPLICATIONS

PDE3B (N-20) is recommended for detection of PDE3B of 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).

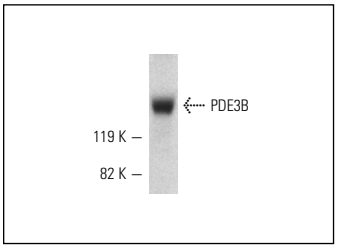
PDE3B (N-20) is also recommended for detection of PDE3B in additional species, including bovine.

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

Molecular Weight of PDE3B: 135 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

DATA



PDE3B (N-20): sc-11835. Western blot analysis of PDE3B expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhu, B., et al. 2005. Suppression of cyclic GMP-specific phosphodiesterase 5 promotes apoptosis and inhibits growth in HT29 cells. J. Cell. Biochem. 94: 336-350.
2. Palmer, D. and Jimmo, S.L. 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.
3. Zu, L., et al. 2008. Salicylate blocks lipolytic actions of tumor necrosis factor-α in primary rat adipocytes. Mol. Pharmacol. 73: 215-223.
4. Dong, H., et al. 2010. Inhibition of PDE3, PDE4 and PDE7 potentiates glucocorticoid-induced apoptosis and overcomes glucocorticoid resistance in CEM T leukemic cells. Biochem. Pharmacol. 79: 321-329.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **PDE3B (F-9): sc-376823**, our highly recommended monoclonal alternative to PDE3B (N-20).