

PDE5A (54): sc-136027

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. The PDE family contains proteins that serve tissue-specific roles in the regulation of lipolysis, glycogenolysis, myocardial contractility and smooth muscle relaxation. PDE5A, also designated cGMP-binding cGMP-specific phosphodiesterase or CGB-PDE, regulates the intracellular concentration of cyclic nucleotides and thereby is important in signal transduction. PDE5A catalyzes the hydrolysis of cGMP to 5'GMP and the protein is expressed in heart, placenta, aortic smooth muscle cells, skeletal muscle and pancreas.

REFERENCES

- Cheung, P.P., Yu, L., Zhang, H. and Colman, R.W. 1998. Partial characterization of the active site human platelet cAMP phosphodiesterase, PDE3A, by site-directed mutagenesis. *Arch. Biochem. Biophys.* 360: 99-104.
- Gantner, F., Gotz, C., Gekeler, V., Schudt, C., Wendel, A. and Hatzelmann, A. 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.
- Fisher, D.A., Smith, J.F., Pillar, J.S., St. Denis, S.H. and Cheng, J.B. 1998. Isolation and characterization of PDE8A, a novel human cAMP-specific phosphodiesterase. *Biochem. Biophys. Res. Commun.* 246: 570-577.
- Hetman, J.M., Soderling, S.H., Glavas, N.A. and Beavo, J.A. 2000. Cloning and characterization of PDE7B, a cAMP-specific phosphodiesterase. *Proc. Natl. Acad. Sci. USA* 97: 472-476.
- SWISS-PROT/TrEMBL (O60930). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

SOURCE

PDE5A (54) is a mouse monoclonal antibody raised against amino acids 2-108 of PDE5A of rat origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PDE5A (54) is recommended for detection of PDE5A of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Molecular Weight of PDE5A: 95 kDa.

Positive Controls: rat lung extract: sc-2396.

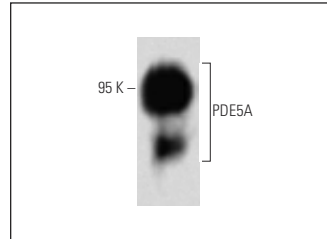
STORAGE

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. Not for resale.

DATA



PDE5A (54): sc-136027. Western blot analysis of PDE5A expression in rat lung tissue extract.

SELECT PRODUCT CITATIONS

- Füllhase, C., Hennenberg, M., Sandner, P., Strittmatter, F., Niedworok, C., Bauer, R.M., Gratzke, C., Soler, R., Stief, C. and Andersson, K.E. 2015. Reduction of obstruction related bladder overactivity by the guanylyl cyclase modulators BAY 41-2272 and BAY 60-2770 alone or in combination with a phosphodiesterase type 5 inhibitor. *Neurourol. Urodyn.* 34: 787-793.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.