SANTA CRUZ BIOTECHNOLOGY, INC.

PDE8A (R-15): sc-17231

BACKGROUND

Phosphodiesterases (PDEs) are important for the downregulation of the intracellular level of the second messenger cyclic adenosine monophosphate (cAMP) by hydrolyzing cAMP to 5'AMP. Human cyclic GMP-stimulated 3',5'-cyclic nucleotide phosphodiesterase (PDE2A) is expressed in cerebellum, neocortex, heart, kidney, placenta, lung, pulmonary artery, skeletal muscle and pancreas. PDE2A expression is detected in venous and capillary endothelial cells in cardiac and renal tissue. PDE8A is a high affinity cAMP-specific protein that is expressed in a wide variety of tissues including testis, ovary, small intestine, and colon. PDE8B is expressed specifically and abundantly in the thyroid gland and shares 65% sequence identity (83% similarity) with PDE8A.

REFERENCES

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2. 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.
3. 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.
4. 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.
5. Hayashi, M., Matsushima, K., Ohashi, H., Tsunoda, H., Murase, S., Kawarada, Y. and Tanaka, T. 1998. Molecular cloning and characterization of human PDE8B, a novel thyroid-specific isozyme of 3',5'-cyclic nucleotide phosphodiesterase. Biochem. Biophys. Res. Commun. 250: 751-756.
6. Sadhu, K., Hensley, K., Florio, V.A. and Wolda, S.L. 1999. Differential expression of the cyclic GMP-stimulated phosphodiesterase PDE2A in human venous and capillary endothelial cells. J. Histochem. Cytochem. 47: 895-906.

CHROMOSOMAL LOCATION

Genetic locus: PDE8A (human) mapping to 15q26.1; Pde8a (mouse) mapping to 7 D2.

SOURCE

PDE8A (R-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDE8A of human origin.

STORAGE

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

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-17231 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PDE8A (R-15) is recommended for detection of PDE8A and PDE8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PDE8A (R-15) is also recommended for detection of PDE8A and PDE8 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PDE8A siRNA (h): sc-41617 and PDE8A siRNA (m): sc-41616.

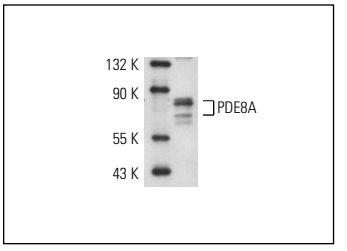
Molecular Weight of PDE8A: 85/90 kDa.

Positive Controls: mouse ovary extract: sc-2404.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PDE8A (R-15): sc-17231. Western blot analysis of PDE8A expression in mouse ovary extract. Note splice variants.

RESEARCH USE

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