

PDE8A (C-15): sc-17232

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

1. Rosman, G.J., et al. 1997. Isolation and characterization of human cDNAs encoding a cGMP-stimulated 3',5'-cyclic nucleotide phosphodiesterase. *Gene* 191: 89-95.
2. Fisher, D.A., et al. 1998. Isolation and characterization of PDE8A, a novel human cAMP-specific phosphodiesterase. *Biochem. Biophys. Res. Commun.* 246: 570-577.
3. 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.
4. Cheung, P.P., et al. 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., et al. 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., et al. 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 15q25.3; Pde8a (mouse) mapping to 7 D3.

SOURCE

PDE8A (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PDE8A 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-17232 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

PDE8A (C-15) is recommended for detection of PDE8A of human origin and PDE8 of mouse and rat 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).

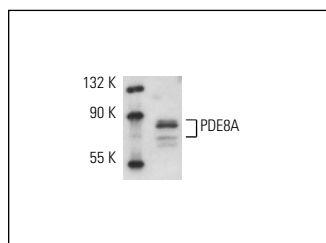
PDE8A (C-15) is also recommended for detection of PDE8A in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for PDE8A siRNA (h): sc-41617, PDE8A siRNA (m): sc-41616, PDE8A shRNA Plasmid (h): sc-41617-SH, PDE8A shRNA Plasmid (m): sc-41616-SH, PDE8A shRNA (h) Lentiviral Particles: sc-41617-V and PDE8A shRNA (m) Lentiviral Particles: sc-41616-V.

Molecular Weight of PDE8A: 85/90 kDa.

Positive Controls: mouse ovary extract: sc-2404.

DATA



PDE8A (C-15): sc-17232. Western blot analysis of PDE8A expression in mouse ovary extract. Note splice variants.

SELECT PRODUCT CITATIONS

1. 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.
2. Vasta, V., et al. 2006. Modulation of Leydig cell function by cyclic nucleotide phosphodiesterase 8A. *Proc. Natl. Acad. Sci. USA* 103: 19925-19930.
3. Shimizu-Albergine, M., et al. 2012. cAMP-specific phosphodiesterases 8A and 8B, essential regulators of Leydig cell steroidogenesis. *Mol. Pharmacol.* 81: 556-566.

STORAGE

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



Try **PDE8A (1H6): sc-293342**, our highly recommended monoclonal alternative to PDE8A (C-15).