SANTA CRUZ BIOTECHNOLOGY, INC.

PDE2A (K-20): sc-17228

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.

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.

CHROMOSOMAL LOCATION

Genetic locus: PDE2A (human) mapping to 11q13.4; Pde2a (mouse) mapping to 7 E3.

SOURCE

PDE2A (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDE2A 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-17228 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PDE2A (K-20) is recommended for detection of PDE2A 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).

PDE2A (K-20) is also recommended for detection of PDE2A in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PDE2A siRNA (h): sc-41590, PDE2A siRNA (m): sc-41591, PDE2A shRNA Plasmid (h): sc-41590-SH, PDE2A shRNA Plasmid (m): sc-41591-SH, PDE2A shRNA (h) Lentiviral Particles: sc-41590-V and PDE2A shRNA (m) Lentiviral Particles: sc-41591-V.

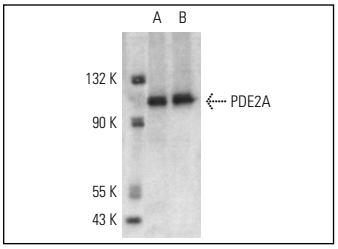
Molecular Weight of PDE2A: 105 kDa.

Positive Controls: rat brain extract: sc-2392, mouse brain extract: sc-2253 or IMR-32 cell lysate: sc-2409.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



PDE2A (K-20): sc-17228. Western blot analysis of PDE2A expression in mouse brain (**A**) and rat brain (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Russwurm, C., et al. 2009. Dual acylation of PDE2A splice variant 3: targeting to synaptic membranes. J. Biol. Chem. 284: 25782-25790.
2. Schankin, C.J., et al. 2010. Nitric oxide-induced changes in endothelial expression of phosphodiesterases 2, 3, and 5. Headache 50: 431-441.

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.

PROTOCOLS

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