

PDE3A (H-300): sc-20792

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.

CHROMOSOMAL LOCATION

Genetic locus: PDE3A (human) mapping to 12p12.2; Pde3a (mouse) mapping to 6 G2.

SOURCE

PDE3A (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 of PDE3A 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.

APPLICATIONS

PDE3A (H-300) is recommended for detection of PDE3A 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).

PDE3A (H-300) is also recommended for detection of PDE3A in additional species, including equine and bovine.

Suitable for use as control antibody for PDE3A siRNA (h): sc-41592, PDE3A siRNA (m): sc-41593, PDE3A shRNA Plasmid (h): sc-41592-SH, PDE3A shRNA Plasmid (m): sc-41593-SH, PDE3A shRNA (h) Lentiviral Particles: sc-41592-V and PDE3A shRNA (m) Lentiviral Particles: sc-41593-V.

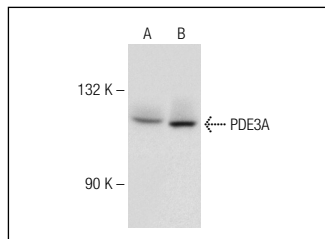
Molecular Weight of PDE3A: 110 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, HeLa whole cell lysate: sc-2200 or mouse heart extract: sc-2254.

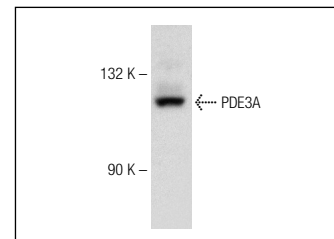
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PDE3A (H-300): sc-20792. Western blot analysis of PDE3A expression in COLO 320DM (A) and HeLa (B) whole cell lysates.



PDE3A (H-300): sc-20792. Western blot analysis of PDE3A expression in P23 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Tang, T., et al. 2010. Adenylyl cyclase 6 deletion reduces left ventricular hypertrophy, dilation, dysfunction, and fibrosis in pressure-overloaded female mice. *J. Am. Coll. Cardiol.* 55: 1476-1486.
2. Oliva, A.A., et al. 2012. Phosphodiesterase isoform-specific expression induced by traumatic brain injury. *J. Neurochem.* 123: 1019-1029.

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.

MONOS
Satisfaction
Guaranteed

Try **PDE3A (2D7): sc-293446**, our highly recommended monoclonal alternative to PDE3A (H-300).