

PDE1A (H-105): sc-50480

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 PDE1 family are calmodulin-dependent (CaM-PDE) proteins that undergo stimulation through a calcium-calmodulin complex. The activation of PDE1A requires a sustained influx of Ca²⁺. Excluding its two short unique regions, human PDE1A has a predicted amino acid sequence exhibiting 94% homology to PDE of bovine origin. PDE1A is most highly expressed in the brain, heart, kidney and skeletal muscle.

REFERENCES

1. Clapham, J.C., et al. 2001. Cloning of dog heart PDE1A—a first detailed characterization at the molecular level in this specie. *Gene* 268: 165-171.
2. Fidock, M., et al. 2002. Isolation and differential tissue distribution of two human cDNAs encoding PDE1 splice variants. *Cell. Signal.* 14: 53-60.
3. Lefievre, L., et al. 2002. Presence of cyclic nucleotide phosphodiesterases PDE1A, existing as a stable complex with calmodulin and PDE3A in human spermatozoa. *Biol. Reprod.* 67: 423-430.

CHROMOSOMAL LOCATION

Genetic locus: PDE1A (human) mapping to 2q32.1; Pde1a (mouse) mapping to 2 C3.

SOURCE

PDE1A (H-105) is a rabbit polyclonal antibody raised against amino acids 431-535 mapping at the C-terminus of PDE1A 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

PDE1A (H-105) is recommended for detection of PDE1A 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PDE1A siRNA (h): sc-62763, PDE1A siRNA (m): sc-62764, PDE1A shRNA Plasmid (h): sc-62763-SH, PDE1A shRNA Plasmid (m): sc-62764-SH, PDE1A shRNA (h) Lentiviral Particles: sc-62763-V and PDE1A shRNA (m) Lentiviral Particles: sc-62764-V.

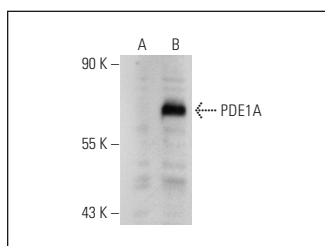
Molecular Weight of PDE1A isoforms: 57-63 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, C2C12 whole cell lysate: sc-364188 or PDE1A (h3): 293 Lysate: sc-172086.

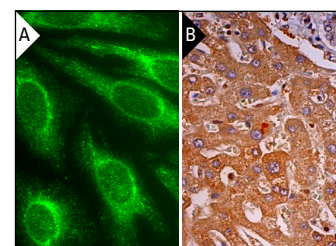
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PDE1A (H-105): sc-50480. Western blot analysis of PDE1A expression in non-transfected: sc-110760 (A) and human PDE1A transfected: sc-172086 (B) 293 whole cell lysates.



PDE1A (H-105): sc-50480. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (B).

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 **PDE1A (B-10): sc-374602**, our highly recommended monoclonal alternative to PDE1A (H-105).