

# PDE4C (H-40): sc-25813

## BACKGROUND

Phosphodiesterases (PDE) hydrolyze cAMP to 5'AMP and thus play a critical role in the regulation of intracellular cAMP. Division of the PDE superfamily by sequence homology and enzymatic properties yields 11 PDE families. A unique upstream conserved region (UCR) characterizes the PDE4 family. Four separate genes (A-D) encode the PDE4 enzymes, and alternative splicing generates short or long isoforms of each gene. Long PDE4 isoforms contain both UCR1 and UCR2 while short PDE4 isoforms possess only UCR2. Both UCR domains are necessary for dimerization of PDE4 isoforms. The human PDE4C gene maps to chromosome 19p13.11. The splice variants include isoforms PDE4C1-7.

## REFERENCES

- Bolger, G., Michaeli, T., Martins, T., St John, T., Steiner, B., Rodgers, L., Riggs, M., Wigler, M. and Ferguson, K. 1993. A family of human phosphodiesterases homologous to the dunce learning and memory gene product of *Drosophila melanogaster* are potential targets for antidepressant drugs. *Mol. Cell. Biol.* 13: 6558-6571.
- Sullivan, M., Olsen, A.S. and Houslay, M.D. 1999. Genomic organisation of the human cyclic AMP-specific phosphodiesterase PDE4C gene and its chromosomal localisation to 19p13.1, between RAB3A and JUND. *Cell. Signal.* 11: 735-742.
- Francis, S.H., Turko, I.V. and Corbin, J.D. 2001. Cyclic nucleotide phosphodiesterases: relating structure and function. *Prog. Nucleic Acid Res. Mol. Biol.* 65: 1-52.
- Richter, W. and Conti, M. 2002. Dimerization of the type 4 cAMP-specific phosphodiesterases is mediated by the upstream conserved regions (UCRs). *J. Biol. Chem.* 277: 40212-40221.

## CHROMOSOMAL LOCATION

Genetic locus: PDE4C (human) mapping to 19p13.11; Pde4c (mouse) mapping to 8 B3.3.

## SOURCE

PDE4C (H-40) is a rabbit polyclonal antibody raised against amino acids 673-712 mapping at the C-terminus of PDE4C 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.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

PDE4C (H-40) is recommended for detection of PDE4C of mouse 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).

PDE4C (H-40) is also recommended for detection of PDE4C in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PDE4C siRNA (h): sc-41601, PDE4C siRNA (m): sc-152129, PDE4C shRNA Plasmid (h): sc-41601-SH, PDE4C shRNA Plasmid (m): sc-152129-SH, PDE4C shRNA (h) Lentiviral Particles: sc-41601-V and PDE4C shRNA (m) Lentiviral Particles: sc-152129-V.

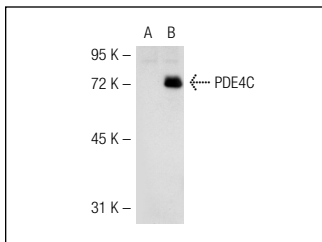
Molecular Weight of PDE4C: 80 kDa.

Positive Controls: PDE4C (m): 293T Lysate: sc-122453 or SH-SY5Y cell lysate: sc-3812.

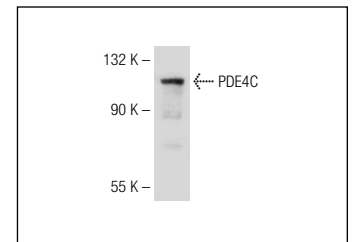
## RECOMMENDED SECONDARY REAGENTS

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



PDE4C (H-40): sc-25813. Western blot analysis of PDE4C expression in non-transfected: sc-117752 (A) and mouse PDE4C transfected: sc-122453 (B) 293T whole cell lysates.



PDE4C (H-40): sc-25813. Western blot analysis of PDE4C expression in SH-SY5Y whole cell lysate.

## RESEARCH USE

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