

# PDE4C (4E5): sc-517011

## 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 19p13.1. The splice variants include isoforms PDE4C1-7.

## REFERENCES

1. 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.
2. 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.
3. 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.
4. 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.
5. SWISS-PROT/TrEMBL (Q08493). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>.

## CHROMOSOMAL LOCATION

Genetic locus: PDE4C (human) mapping to 19p13.11.

## SOURCE

PDE4C (4E5) is a mouse monoclonal antibody raised against amino acids 1-99 representing partial length PDE4C of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>3</sub> kappa light chain 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) for detailed protocols and support products.

## APPLICATIONS

PDE4C (4E5) is recommended for detection of PDE4C of 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).

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

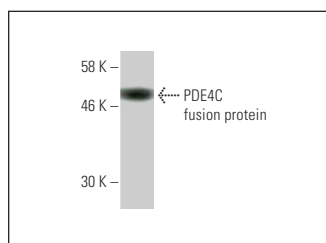
Molecular Weight of PDE4C: 80 kDa.

## RECOMMENDED SUPPORT REAGENTS

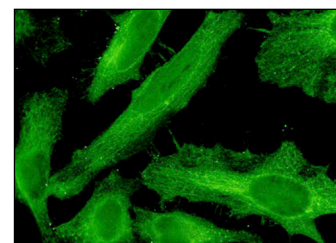
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



PDE4C (4E5): sc-517011. Western blot analysis of human recombinant PDE4C fusion protein.



PDE4C (4E5): sc-517011. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization.

## RESEARCH USE

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