



PDE4A (h): 293T Lysate: sc-113958

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 PDE4A gene maps to chromosome 19p13.2 and spans 50 kilobases with 17 exons. The splice variants include isoforms PDE4A1-6.

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. Horton, Y.M., Sullivan, M. and Houslay, M.D. 1995. Molecular cloning of a novel splice variant of human type 4A (PDE4A) cyclic AMP phosphodiesterase and localization of the gene to the p13.2-q12 region of human chromosome 19. *Biochem. J.* 308: 683-691.
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 (P27815). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>.

CHROMOSOMAL LOCATION

Genetic locus: PDE4A (human) mapping to 19q13.2.

PRODUCT

PDE4A (h): 293T Lysate represents a lysate of human PDE4A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

PDE4A (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive PDE4A antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.