

PDE1C (h3): 293 Lysate: sc-158826

BACKGROUND

Phosphodiesterases (PDEs, also designated cyclic nucleotide phosphodiesterase) are important for the downregulation of intracellular levels of the second messengers cyclic adenosine monophosphate (cAMP) and cyclic guanosine monophosphate (cGMP). The PDE1 family are calmodulin-dependent (CaM-PDE) proteins that undergo stimulation through a calcium-calmodulin complex and function to hydrolyze cAMP to 5'AMP and cGMP to 5'GMP. PDE1C (phosphodiesterase 1C), also known as HCAM3, is a widely expressed protein that has a high affinity for both cAMP and cGMP. Two isoforms, designated PDE1C1 and PDE1C2, exist due to alternative splicing at the C-terminus. While both isoforms are expressed in low levels throughout the body, PDE1C2 is expressed predominately in the brain and heart, while PDE1C1 is expressed predominately in the brain, heart and lung.

REFERENCES

1. Cherry, J.A. and Pho, V. 2002. Characterization of cAMP degradation by phosphodiesterases in the accessory olfactory system. *Chem. Senses* 27: 643-652.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602987. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Rybalkin, S.D., Yan, C., Bornfeldt, K.E. and Beavo, J.A. 2003. Cyclic GMP phosphodiesterases and regulation of smooth muscle function. *Circ. Res.* 93: 280-291.
4. Ahlström, M., Pekkinen, M., Huttunen, M. and Lamberg-Allardt, C. 2005. Cyclic nucleotide phosphodiesterases (PDEs) in human osteoblastic cells; the effect of PDE inhibition on cAMP accumulation. *Cell. Mol. Biol. Lett.* 10: 305-319.
5. Evgenov, O.V., Busch, C.J., Evgenov, N.V., Liu, R., Petersen, B., Falkowski, G.E., Petho, B., Vas, A., Bloch, K.D., Zapol, W.M. and Ichinose, F. 2006. Inhibition of phosphodiesterase 1 augments the pulmonary vasodilator response to inhaled nitric oxide in awake lambs with acute pulmonary hypertension. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 290: 723-729.
6. Dolci, S., Belmonte, A., Santone, R., Giorgi, M., Pellegrini, M., Carosa, E., Piccione, E., Lenzi, A. and Jannini, E.A. 2006. Subcellular localization and regulation of type-1C and type-5 phosphodiesterases. *Biochem. Biophys. Res. Commun.* 341: 837-846.

CHROMOSOMAL LOCATION

Genetic locus: PDE1C (human) mapping to 7p14.3.

PRODUCT

PDE1C (h3): 293 Lysate represents a lysate of human PDE1C transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

PDE1C (h3): 293 Lysate is suitable as a Western Blotting positive control for human reactive PDE1C antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

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.