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SANTA CRUZ BIOTECHNOLOGY, INC.

PDE1A (h3): 293 Lysate: sc-172086

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 Ca^{2+}. Excluding its two short unique regions, human PDE1A has a predicted amino acid sequence exhibiting 94% homology to PDE of cow origin. PDE1A is most highly expressed in the brain, heart, kidney and skeletal muscle.

REFERENCES

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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.
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7. Evgenov, O.V., et al. 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: L723-L729.
8. Nagel, D.J., et al. 2006. Role of nuclear Ca^{2+}/calmodulin-stimulated phosphodiesterase 1A in vascular smooth muscle cell growth and survival. Circ. Res. 98: 777-784.
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CHROMOSOMAL LOCATION

Genetic locus: PDE1A (human) mapping to 2q32.1.

PRODUCT

PDE1A (h3): 293T Lysate represents a lysate of human PDE1A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

PDE1A (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive PDE1A 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.