

PDE1A active protein

PDE1A, Active

CATALOG #
AAA73096

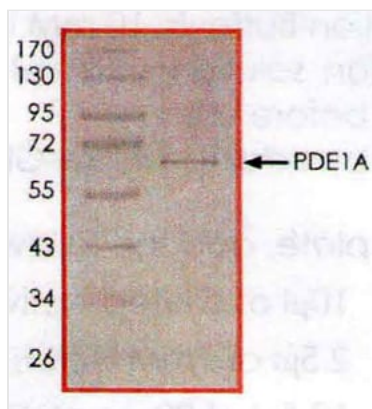
PRODUCT SYNONYMS

PDE1A; Active; PDE1A active protein

PRODUCT SPECIFICATIONS

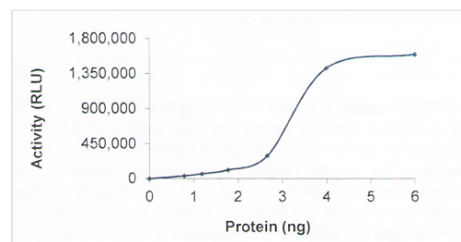
Isotype	Sf9 cells
Specificity	Full length protein expressed in Sf9 cells
Purity/Purification	>80%
Form/Format	Recombinant protein stored in 50mM MOPS, pH 7.0, 300mM NaCl, 150mM imidazole, 0.1mM PMSF, 0.25mM DTT, 25% glycerol.
Concentration	0.1 ug/ul (varies by lot)
Sequence Length	4918
Specific Activity	10,500 nmol/min/mg
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Ships on dry ice. Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

IMAGES



Purity Info

The purity was determined to be >80% by densitometry. Approx. MW 64kDa.



Specific Activity

The specific activity of PDE1A was determined to be 10,500 nmol/min/mg as per activity assay protocol

ADDITIONAL INFORMATION

Related Product Information for PDE1A active protein	Description: Recombinant full-length human PDE1A was expressed by baculovirus in Sf9 insect cells using an N-terminal His tag. Scientific Background: PDE1A is a member of the cyclic nucleotide phosphodiesterase family that is stimulated by Ca2+-calmodulin. PDE1A is a cGMP-specific phosphodiesterase and hydrolyzes cGMP to 5'-GMP. Calmodulin is tightly bound to PDE1A in human spermatozoa and this results in permanent activation of PDE1A (1). Inhibition of PDE1A function significantly attenuates vascular smooth muscle cell growth by decreasing proliferation via G1 arrest and induces apoptosis (2). In vascular smooth muscle cell, PDE1A is important in regulating growth and survival of these cells and thus can contribute to the neointima formation in atherosclerosis and restenosis.
Product Categories/Family for PDE1A active protein	Enzymes; Active Phosphodiesterases
References	1. Lefi"vre L, et al: Presence of cyclic nucleotide phosphodiesterases PDE1A, existing as a stable complex with calmodulin, and PDE3A in human spermatozoa. Biol Reprod. 2002 Aug;67 (2):423-30. 2. Nagel D J, et al: Role of nuclear Ca2+/calmodulin-stimulated phosphodiesterase 1A in vascular smooth muscle cell growth and survival. Circ Res. 2006 Mar 31;98 (6):777-84.

NCBI AND UNIPROT INFORMATION

NCBI GI #	385198066
NCBI GeneID	5136
NCBI Accession #	NM_005019.4
NCBI GenBank Nucleotide #	NM_005019
UniProt Accession #	P54750; Q86VZ0; Q9C0K8; Q9C0K9; Q9C0L0; Q9C0L1; Q9C0L2; Q9C0L3; Q9C0L4; Q9UFX3; D3DPG5
Molecular Weight	~64 kDa
NCBI Official Full Name	Homo sapiens phosphodiesterase 1A (PDE1A), transcript variant 1, mRNA
NCBI Official Synonym Full Names	phosphodiesterase 1A
NCBI Official Symbol	PDE1A
NCBI Official Synonym Symbols	HCAM1; HCAM-1; HSPDE1A; CAM-PDE-1A
NCBI Protein Information	calcium/calmodulin-dependent 3',5'-cyclic nucleotide phosphodiesterase 1A
UniProt Protein Name	Calcium/calmodulin-dependent 3',5'-cyclic nucleotide phosphodiesterase 1A
UniProt Gene Name	PDE1A
UniProt Synonym Gene Names	Cam-PDE 1A

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.