

## Product Data Sheet

## PDE2A Protein, Human (sf9, His)

Cat. No.:	HY-P74647
Synonyms:	cGMP-dependent 3',5'-cyclic phosphodiesterase; CGS-PDE; PDE2A
Species:	Human
Source:	Sf9 insect cells
Accession:	O00408 (E215-H900)
Gene ID:	5138
Molecular Weight:	Approximately 80.73 kDa

PROPERTIES	
<b>Biological Activity</b>	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 10% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION	
Background	PDE2A, a cGMP-activated cyclic nucleotide phosphodiesterase, exhibits dual specificity for the second messengers cAMP and cGMP, crucial regulators in various physiological processes. Demonstrating a higher efficiency with cGMP over cAMP, PDE2A plays a significant role in cell growth and migration. Moreover, it actively participates in the regulation of mitochondrial cAMP levels and respiration, impacting mitochondria morphology and dynamics. Notably, PDE2A is intricately involved in apoptotic cell death by locally modulating cAMP/PKA signaling within the mitochondrion. This
	includes monitoring local cAMP levels at the outer mitochondrial membrane and overseeing PKA-dependent phosphorylation of DNM1L, underscoring its multifaceted contributions to cellular functions.

Caution: Product has not been fully validated for medical applications. For research use only.

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