

## PDE2A Protein, Human, Recombinant (aa 215-900, His)

### General Information

Synonyms:	phosphodiesterase 2A, cGMP-stimulated;cGSPDE;PED2A4;PDE2A1;CGS-PDE
Protein Construction:	A DNA sequence encoding the amino acids (Glu 215-His 900) of human PDE2A (O00408-1) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	O00408-1
Molecular Weight:	80.73 kDa (predicted)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing 20 mM Tris, 500 mM NaCl, pH 7.4, 10% gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

cGMP-dependent 3',5'-cyclic phosphodiesterase, also known as cyclic GMP-stimulated phosphodiesterase and PDE2A, is a peripheral membrane protein that belongs to the cyclic nucleotide phosphodiesterase family and PDE2 subfamily. Phosphodiesterases (PDEs) comprise a family of enzymes that regulate the levels of cyclic nucleotides, key second messengers that mediate a diverse array of functions. Phosphodiesterases (PDEs) modulate signaling by cyclic nucleotides in diverse processes such as cardiac contractility, platelet aggregation, lipolysis,

glycogenolysis, and smooth muscle contraction. PDE2A is an evolutionarily conserved cGMP-stimulated cAMP and cGMP PDE. PDE2A contains two GAF domains. PDE2A is expressed in brain and to a lesser extent in heart, placenta, lung, skeletal muscle, kidney and pancreas. PDE2A is a cyclic nucleotide phosphodiesterase with a dual-specificity for the second messengers cAMP and cGMP, which are key regulators of many important physiological processes. PDE2A is involved in the regulation of blood pressure and fluid homeostasis by the atrial natriuretic peptide (ANP), making PDE2-type enzymes important targets for drug discovery.

### Reference

- Iffland,A. et al., 2005, Biochemistry. 44 (23):8312-25.  
de Oliveira,S.K. et al., 2007, J Biol Chem. 282 (18):13656-63.  
Stephenson,D.T. et al., 2009, J Histochem Cytochem. 57 (10):933-49.  
Russwurm,C. et al., 2009, J Biol Chem. 284 (38):25782-90.

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