

**PDE5A Polyclonal Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP58003****Specification**

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**PDE5A Polyclonal Antibody - Product Information**

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	<a href="#">O76074</a>
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	100 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PDE5A
Epitope Specificity	101-200/875
Isotype	IgG
<b>Purity</b>	
affinity purified by Protein A	
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the cyclic nucleotide phosphodiesterase family. Contains 2 GAF domains.
Post-translational modifications	Phosphorylation is regulated by binding of cGMP to the two allosteric sites (By similarity). Phosphorylation by PRKG1 leads to its activation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

**Background Descriptions**

The cGMP specific phosphodiesterase type 5A (PDE5A) family is comprised of 2 genes (PDE5A and PDE5B) each with multiple splice variants generated by RNA splicing and use of alternate initiation sites. The PDE5 is highly expressed in aorta and lungs, intestine, kidney adrenal gland cerebellum and cerebrum. In cerebellum the PDE5 is highly expressed during neonatal development in Purkinje cells layer. The PDE5 is also abundant in vascular smooth muscle regulating cGMP levels and vascular smooth muscle tonicity. In corpus cavernosum inhibition of PDE5 by sildenafil corrects erectile dysfunctions. The nitric oxide donor sodium nitroprusside (SNP) stimulate PDE5 activity by cGMP dependent kinase phosphorylation. PDE5A1 has 875 amino acids (99.5 kDa). The amino terminal 142 amino acid of the PDE5 gene showed no sequence homology with other PDEs and also contained serine 92 that is phosphorylated by cGMP kinases.

**PDE5A Polyclonal Antibody - Additional Information****Gene ID 8654****Other Names**

cGMP-specific 3', 5'-cyclic phosphodiesterase, 3.1.4.35, cGMP-binding cGMP-specific phosphodiesterase, CGB-PDE, PDE5A, PDE5

**Target/Specificity**

Expressed in aortic smooth muscle cells, heart, placenta, skeletal muscle and pancreas and, to a much lesser extent, in brain, liver and lung.

**Dilution**

WB~1:1000  
IHC-P~N/A  
IHC-F~N/A  
IF~1:50~200  
E~N/A

**Format**

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

**Storage**

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

**PDE5A Polyclonal Antibody - Protein Information**

**Name** PDE5A ([HGNC:8784](#))

**Synonyms** PDE5

**Function**

Plays a role in signal transduction by regulating the intracellular concentration of cyclic nucleotides. This phosphodiesterase catalyzes the specific hydrolysis of cGMP to 5'-GMP (PubMed:[15489334](http://www.uniprot.org/citations/15489334)), (PubMed:[9714779](http://www.uniprot.org/citations/9714779)). Specifically regulates nitric-oxide- generated cGMP (PubMed:[15489334](http://www.uniprot.org/citations/15489334)).

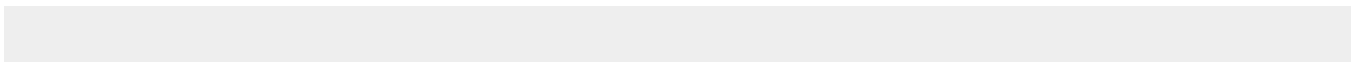
**Tissue Location**

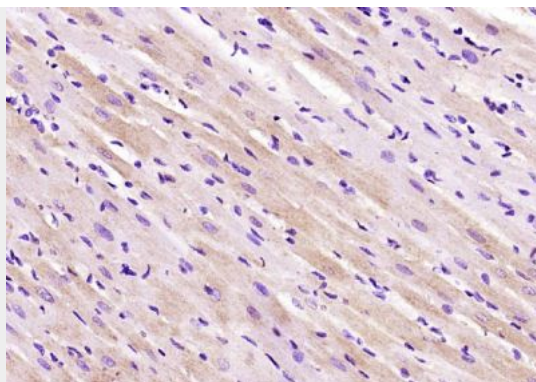
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**PDE5A Polyclonal Antibody - Protocols**

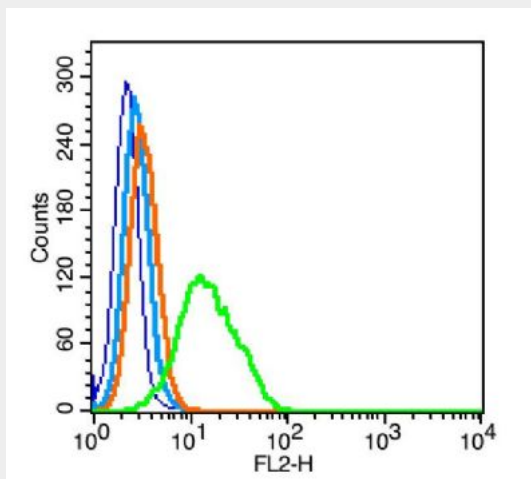
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**PDE5A Polyclonal Antibody - Images**

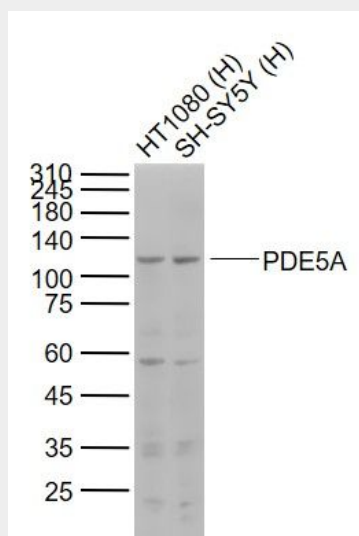


Paraformaldehyde-fixed, paraffin embedded (rat heart tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (PDE5A) Polyclonal Antibody, Unconjugated (bs-2349R) at 1400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control: RSC96(blue), the cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with ice-cold 90% methanol for 30 min on ice.

Isotype Control Antibody: Rabbit IgG(orange) ; Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA ; Primary Antibody Dilution: 0.2 µg in 100 µL 1X PBS containing 0.5% BSA(green).



**Sample:**

Lane 1: HT1080 (Human) Cell Lysate at 30 ug

Lane 2: SH-SY5Y (Human) Cell Lysate at 30 ug

Primary: Anti-PDE5A (bs-2349R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 98 kD

Observed band size: 110 kD