

**PDE9A Antibody (Internal)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS10154****Specification**

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**PDE9A Antibody (Internal) - Product Information**

Application	IHC-P
Primary Accession	<a href="#">O76083</a>
Reactivity	Human, Monkey, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	68kDa KDa
Dilution	IHC-P~~N/A

**PDE9A Antibody (Internal) - Additional Information****Gene ID** 5152**Other Names**

High affinity cGMP-specific 3', 5'-cyclic phosphodiesterase 9A, 3.1.4.35, PDE9A

**Target/Specificity**

Human PDE9A. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

**Reconstitution & Storage**

Long term: -70°C; Short term: +4°C

**Precautions**

PDE9A Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

**PDE9A Antibody (Internal) - Protein Information****Name** PDE9A ([HGNC:8795](#))**Function**

Specifically hydrolyzes the second messenger cGMP, which is a key regulator of many important physiological processes. Highly specific: compared to other members of the cyclic nucleotide phosphodiesterase family, has the highest affinity and selectivity for cGMP (PubMed:<a href="http://www.uniprot.org/citations/18757755" target="\_blank">18757755</a>, PubMed:<a href="http://www.uniprot.org/citations/21483814" target="\_blank">21483814</a>, PubMed:<a href="http://www.uniprot.org/citations/9624146" target="\_blank">9624146</a>). Specifically regulates natriuretic-peptide-dependent cGMP signaling in heart, acting as a regulator of cardiac hypertrophy in myocytes and muscle. Does not regulate nitric oxide-dependent cGMP in heart (PubMed:<a href="http://www.uniprot.org/citations/25799991" target="\_blank">25799991</a>). Additional experiments are required to confirm whether its ability to hydrolyze natriuretic-peptide-dependent cGMP is specific to heart or is a general feature of the protein

(Probable). In brain, involved in cognitive function, such as learning and long-term memory (By similarity).

#### **Cellular Location**

[Isoform PDE9A1]: Cell projection, ruffle membrane. Cytoplasm, perinuclear region. Golgi apparatus. Endoplasmic reticulum. Cell membrane, sarcolemma [Isoform PDE9A3]: Cytoplasm. Endoplasmic reticulum

#### **Tissue Location**

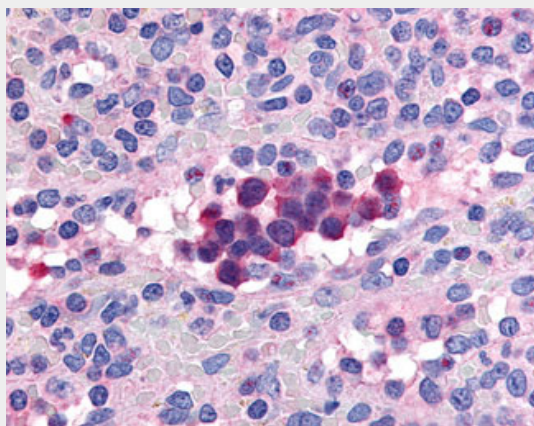
Expressed in all tissues examined (testis, brain, small intestine, skeletal muscle, heart, lung, thymus, spleen, placenta, kidney, liver, pancreas, ovary and prostate) except blood (PubMed:9624146). Highest levels in brain, heart, kidney, spleen, prostate and colon. Isoform PDE9A12 is found in prostate (PubMed:12565835). In brain, present in the cortex, cerebellum, and subiculum (at protein level) (PubMed:22328573). In heart, primarily localizes to myocytes (PubMed:25799991).

#### **PDE9A Antibody (Internal) - 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](#)

#### **PDE9A Antibody (Internal) - Images**



Anti-PDE9A antibody ALS10154 IHC of human spleen.

#### **PDE9A Antibody (Internal) - Background**

Hydrolyzes the second messenger cGMP, which is a key regulator of many important physiological processes.

#### **PDE9A Antibody (Internal) - References**

Fisher D.A., et al. J. Biol. Chem. 273:15559-15564(1998).

Guipponi M.,et al.Hum. Genet. 103:386-392(1998).  
Rentero C.,et al.Biochem. Biophys. Res. Commun. 301:686-692(2003).  
Wang P.,et al.Gene 314:15-27(2003).  
Rentero C.,et al.BMC Mol. Biol. 7:39-39(2006).