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PDE9A Rabbit pAb

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Catalog # AP54895

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O76083
Reactivity	Mouse
Predicted	Rat, Pig, Human, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	68493
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PDE9A
Epitope Specificity	21-120/593
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Endoplasmic reticulum; Cell projection > ruffle membrane. Cytoplasm > perinuclear region and Cell projection > ruffle membrane. Cytoplasm > perinuclear region. Golgi apparatus. Endoplasmic reticulum.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene catalyzes the hydrolysis of cAMP and cGMP to their corresponding monophosphates. The encoded protein plays a role in signal transduction by regulating the intracellular concentration of these cyclic nucleotides. Multiple transcript variants encoding several different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	5152
Other Names	High affinity cGMP-specific 3', 5'-cyclic phosphodiesterase 9A, 3.1.4.35, PDE9A (HGNC:8795)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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.

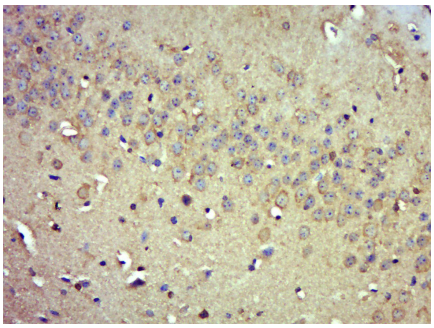
Protein Information

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:18757755, PubMed:21483814, PubMed:9624146). 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:25799991). 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).

Background

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Images



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); 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 (PDE9A) Polyclonal Antibody, Unconjugated (AP54895) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.