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PDE9A Antibody (clone 1E1)

Mouse Monoclonal Antibody

Catalog # ALS14273

Specification

PDE9A Antibody (clone 1E1) - Product Information

Application	**IHC**
Primary Accession	O76083
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**68kDa KDa**

PDE9A Antibody (clone 1E1) - 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

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
PDE9A Antibody (clone 1E1) is for research use only and not for use in diagnostic or therapeutic procedures.

PDE9A Antibody (clone 1E1) - 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:9624146, PubMed:18757755, PubMed:21483814). 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

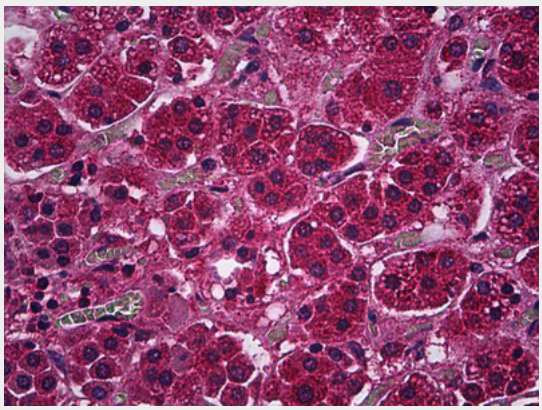
Tissue Location
Expressed in all tissues examined (testis, brain, small intestine, skeletal muscle, heart, lung, thymus, spleen, placenta, kidney, liver, pancreas, ovary and prostate) except blood (PubMed:9624146). Highest levels in brain, heart, kidney, spleen, prostate and colon. Isoform PDE9A12 is 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).

PDE9A Antibody (clone 1E1) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PDE9A Antibody (clone 1E1) - Images



Anti-PDE9A antibody IHC of human adrenal cortex.

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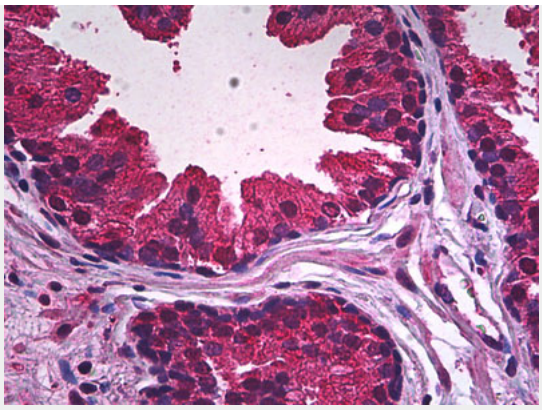

Anti-PDE9A antibody IHC of human prostate, epithelium.

PDE9A Antibody (clone 1E1) - Background

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

PDE9A Antibody (clone 1E1) - References

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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).