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PDE7A Rabbit pAb

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Catalog # AP54552

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q13946
Reactivity	Human, Mouse, Rat
Predicted	Chicken, Dog, Pig, Horse, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55505
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PDE7A
Epitope Specificity	341-440/482
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
SIMILARITY	Belongs to the cyclic nucleotide phosphodiesterase family. PDE7 subfamily.
SUBUNIT	Interacts with CBFA2T3.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Phosphodiesterases (PDE, also designated cyclic nucleotide phosphodiesterase) are important for the downregulation of the intracellular level of the second messenger cyclic adenosine monophosphate (cAMP) by hydrolyzing cAMP to 5'AMP. Phosphodiesterase type 3 isoforms, PDE3A and 3B, are expressed primarily in cardiovascular tissue and adipose tissue, respectively. PDE3A, is found in myocardium and platelets and PDE3B is found in lymphocytes. The PDE7A1 (HCP1) isozyme and the PDE7A2 proteins, alternate splice products of PDE7A, are highly expressed in skeletal muscle. PDE7B is most highly expressed in pancreas. The PDE family contains proteins that serve tissue-specific roles in regulation of lipolysis, glycogenolysis, myocardial contractility, and smooth muscle relaxation.

Additional Information

Gene ID	5150
Other Names	High affinity 3', 5'-cyclic-AMP phosphodiesterase 7A, 3.1.4.53, HCP1, TM22, cAMP-specific phosphodiesterase 7A, PDE7A {ECO:0000303|PubMed:9195912, ECO:0000312|HGNC:HGNC:8791}
Target/Specificity	PDE7A1 is found at high levels in skeletal muscle and at low levels in a variety of tissues including brain and heart. It is expressed as well in two T-cell lines. PDE7A2 is found abundantly in skeletal muscle and at low levels in heart.

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1 □g/Test
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.

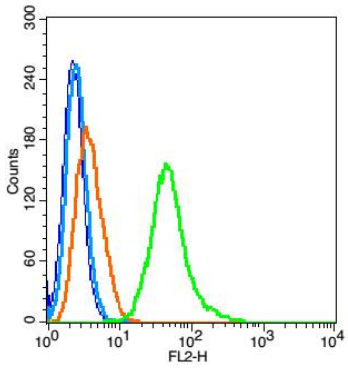
Protein Information

Name	PDE7A {ECO:0000303|PubMed:9195912, ECO:0000312|HGNC:HGNC:8791}
Function	Hydrolyzes the second messenger cAMP, which is a key regulator of many important physiological processes (PubMed:19350606, PubMed:8389765, PubMed:9195912). May have a role in muscle signal transduction (PubMed:9195912).
Cellular Location	[Isoform PDE7A1]: Cytoplasm, cytosol. Note=PDE7A1 (57 kDa) is located mostly to soluble cellular fractions.
Tissue Location	[Isoform PDE7A1]: Found at high levels in skeletal muscle and at low levels in a variety of tissues including brain and heart (PubMed:9195912). It is expressed as well in two T-cell lines (PubMed:9195912).

Background

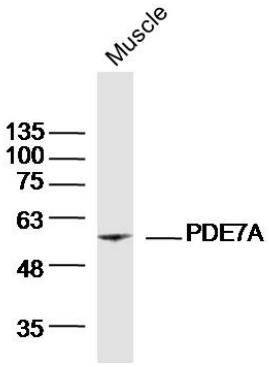
Phosphodiesterases (PDE, also designated cyclic nucleotide phosphodiesterase) are important for the downregulation of the intracellular level of the second messenger cyclic adenosine monophosphate (cAMP) by hydrolyzing cAMP to 5'AMP. Phosphodiesterase type 3 isoforms, PDE3A and 3B, are expressed primarily in cardiovascular tissue and adipose tissue, respectively. PDE3A, is found in myocardium and platelets and PDE3B is found in lymphocytes. The PDE7A1 (HCP1) isozyme and the PDE7A2 proteins, alternate splice products of PDE7A, are highly expressed in skeletal muscle. PDE7B is most highly expressed in pancreas. The PDE family contains proteins that serve tissue-specific roles in regulation of lipolysis, glycogenolysis, myocardial contractility, and smooth muscle relaxation.

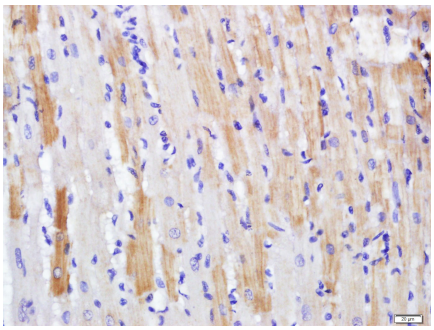
Images



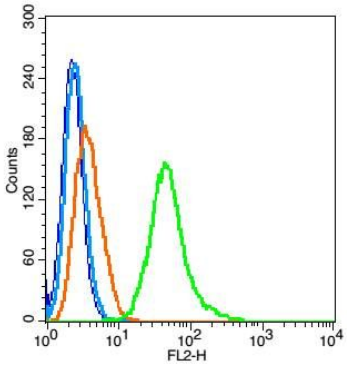
Blank control(blue): RSC96 cells(fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 30 min on ice). Primary Antibody:Rabbit Anti- PDE7A antibody(AP54552), Dilution: 1 µg in 100 µL 1X PBS containing 0.5% BSA; Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions); Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Sample: Muscle (Mouse)Lysate at 40 ug
Primary: Anti-PDE7A(AP54552)at 1/300 dilution
Secondary: IRDye800CW Goat Anti-RabbitIgG at 1/20000 dilution
Predicted band size: 55kD
Observed band size: 55kD





Paraformaldehyde-fixed, paraffin embedded (rat heart); 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 (PDE7A) Polyclonal Antibody, Unconjugated (AP54552) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



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