

Rabbit Polyclonal Anti-PDE3A antibody

Catalog Number: PD3A-101AP

General Information

Product Description	Pan PDE3A Antibody Affinity Purified cGMP-inhibited 3',5'-cyclic phosphodiesterase A isoform 1 Antibody Affinity Purified
Accession #	Uniprot: Q14432 NCBI: NP_000912.3
Verified Applications	ELISA, ICC, IF, IHC, IP, WB
Species Cross Reactivity	Human, Monkey, Mouse, Rat, Xenopus
Host	Rabbit
Immunogen	Synthetic peptide selective only for PDE3A variants.
Alternative Nomenclature	cAMP phosphodiesterase myocardial cGMP inhibited antibody, CGI-PDE A antibody, PDE 3A antibody, Phosphodiesterase 3A antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	0.72 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20°C for long term storage.

Recommended Dilutions

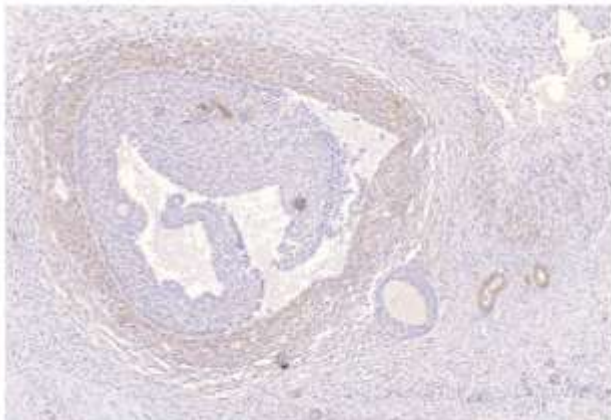
DOT Blot	1:10,000
ELISA	1:10,000
Immunocytochemistry	1:250
Immunofluorescence	1:250
Immunohistochemistry	1:250
Immunoprecipitation	1:200
Western Blot	1:500

Related Products

Catalog

FITC-Conjugated	PD3A-FITC
Antigenic Blocking Peptide	P-PD3A
Western Blot Positive Control	PC-PD3A
Phospho-Specific	PPD3A-140AP
Goat anti-PDE3A	PD3A-112AP

Application Verification:



IHC of PD3A-101AP with human ovarian medulla tissue. 1:100 antibody dilution. Image courtesy of Steven S Petersen, MD, PhD Copenhagen University Hospital, Denmark.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

Cyclic nucleotides are hydrolyzed and compartmentalized by a family of enzymes called phosphodiesterases. In mammals at least 12 different families of phosphodiesterases (PDEs) can be discriminated (PDE1-PDE12) based on their kinetic properties and inhibition to various pharmacological agents. The members of the PDE families are known as cGMP inhibited PDEs. The PDE3 enzymes bind both cGMP and cAMP with different affinities, with cAMP 4-10-fold than cGMP. The PDE3 family is comprised of two members: PDE3A and PDE3B. PDE3A is a 125 kDa protein and is expressed in various tissues including myocardium, vascular and non vascular smooth muscles, megakaryocytes and a subset of neurons (1). PDE3A has two splice variants and is expressed in adipocyte tissue, hepatocyte, kidney, spermatocytes and embryonic neuroepithelium (2). Both PDE3A and PDE3B are therapeutic targets for the treatment of obesity as inhibition of PDE3 increases the lipolytic activity and alter the insulin secretion and its response. PDE3 inhibitors also promote thermogenic and cardiotoxic effects in animals.

The PDE3A family-selective antibody were generated against a conserved sequence near the N-terminal that is unique to PDE3 family members. The polyclonal antibody labels two bands of 60 and 80 kDa in stimulated JURKAT cells and adipocyte membranes. The two bands appear to be the result of proteolytic activity as suggested by some investigators. PDE3A-selective antibody is available in affinity-purified form for Western blotting, confocal and immunocytochemical analyses. Western blot positive controls in ready-to-use buffer and antigenic blocking peptides are available also available. Antibodies can be prepared with custom formulations or conjugations upon request, additional charges may apply.

References:

1. Snyder, Peter B. "The adipocyte cGMP-inhibited cyclic nucleotide phosphodiesterase (PDE3B) as a target for lipolytic and thermogenic agents for the treatment of obesity." *Emerging Therapeutic Targets* 3.4 (1999): 587-599.
2. Reinhardt, Rickey R., et al. "Distinctive anatomical patterns of gene expression for cGMP-inhibited cyclic nucleotide phosphodiesterases." *Journal of Clinical Investigation* 95.4 (1995): 1528.

* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.