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PLA2G6 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9938c

Specification

PLA2G6 Antibody (Center) - Product Information

Application	**IF, WB, IHC-P, FC,E**
Primary Accession	O60733
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**89903**
Antigen Region	**551-580**

PLA2G6 Antibody (Center) - Additional Information

Gene ID 8398

Other Names
85/88 kDa calcium-independent phospholipase A2, CaI-PLA2, Group VI phospholipase A2, GVI PLA2, Intracellular membrane-associated calcium-independent phospholipase A2 beta, iPLA2-beta, Patatin-like phospholipase domain-containing protein 9, PNPLA9, PLA2G6, PLPLA9

Target/Specificity
This PLA2G6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 551-580 amino acids from the Central region of human PLA2G6.

Dilution
IF~~1:10~50
WB~~1:1000
IHC-P~~1:10~50
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PLA2G6 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

PLA2G6 Antibody (Center) - Protein Information

Name PLA2G6

Synonyms PLPLA9

Function Calcium-independent phospholipase involved in phospholipid remodeling with implications in cellular membrane homeostasis, mitochondrial integrity and signal transduction. Hydrolyzes the ester bond of the fatty acyl group attached at sn-1 or sn-2 position of phospholipids (phospholipase A1 and A2 activity respectively), producing lysophospholipids that are used in deacylation-reacylation cycles (PubMed:9417066, PubMed:10092647, PubMed:10336645, PubMed:20886109). Hydrolyzes both saturated and unsaturated long fatty acyl chains in various glycerophospholipid classes such as phosphatidylcholines, phosphatidylethanolamines and phosphatidates, with a preference for hydrolysis at sn-2 position (PubMed:10092647, PubMed:10336645, PubMed:20886109). Can further hydrolyze lysophospholipids carrying saturated fatty acyl chains (lysophospholipase activity) (PubMed:20886109). Upon oxidative stress, contributes to remodeling of mitochondrial phospholipids in pancreatic beta cells, in a repair mechanism to reduce oxidized lipid content (PubMed:23533611). Preferentially hydrolyzes oxidized polyunsaturated fatty acyl chains from cardiolipins, yielding monolysocardiolipins that can be reacylated with unoxidized fatty acyls to regenerate native cardiolipin species (By similarity). Hydrolyzes oxidized glycerophosphoethanolamines present in pancreatic islets, releasing oxidized polyunsaturated fatty acids such as hydroxyeicosatetraenoates (HETEs) (By similarity). Has thioesterase activity toward fatty-acyl CoA releasing CoA-SH known to facilitate fatty acid transport and beta- oxidation in mitochondria particularly in skeletal muscle (PubMed:20886109). Plays a role in regulation of membrane dynamics and homeostasis. Selectively hydrolyzes sn-2 arachidonoyl group in plasmalogen phospholipids, structural components of lipid rafts and myelin (By similarity). Regulates F-actin polymerization at the pseudopods, which is required for both speed and directionality of MCP1/CCL2-induced monocyte chemotaxis (PubMed:18208975). Targets membrane phospholipids to produce potent lipid signaling messengers. Generates lysophosphatidate (LPA, 1-acyl-glycerol-3-phosphate), which acts via G-protein receptors in various cell types (By similarity). Has phospholipase A2 activity toward platelet-activating factor (PAF, 1-O-alkyl-2-acetyl-sn-glycero-3-phosphocholine), likely playing a role in inactivation of this potent pro-inflammatory signaling lipid (By similarity). In response to glucose, amplifies calcium influx in pancreatic beta cells to promote INS secretion (By similarity).

Cellular Location
Cytoplasm. Cell membrane. Mitochondrion {ECO:0000250|UniProtKB:P97819}. Cell projection, pseudopodium. Note=Recruited to the membrane-enriched pseudopods upon MCP1/CCL2 stimulation in monocytes

Tissue Location
Four different transcripts were found to be expressed in a distinct tissue distribution

PLA2G6 Antibody (Center) - 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

PLA2G6 Antibody (Center) - Images

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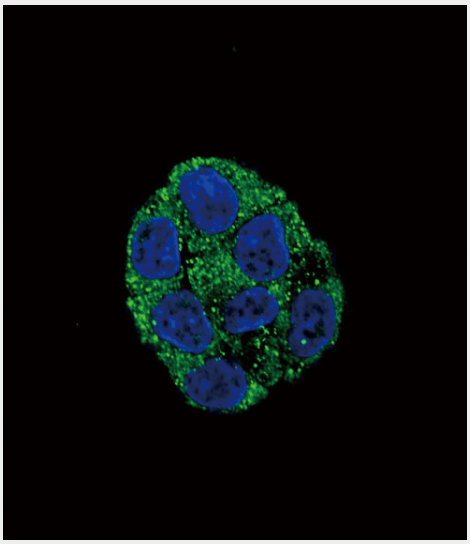
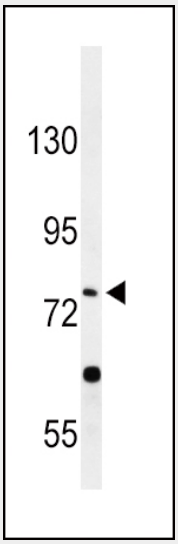


Confocal immunofluorescent analysis of PLA2G6 Antibody (Center)(Cat#AP9938c) with HepG2 cell followed by Alexa Fluor?488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).



Western blot analysis of PLA2G6 Antibody (Center) (Cat. #AP9938c) in HepG2 cell line lysates (35ug/lane). PLA2G6 (arrow) was detected using the purified Pab.

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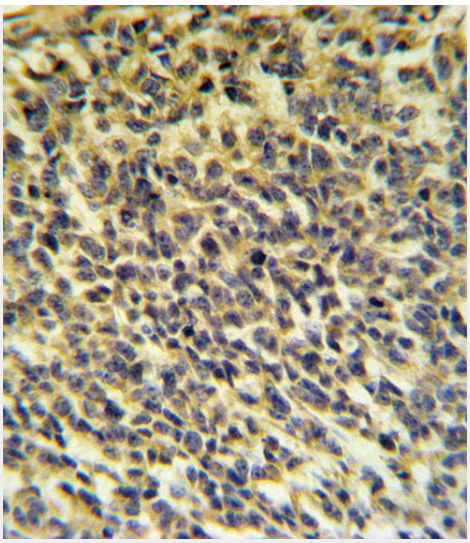
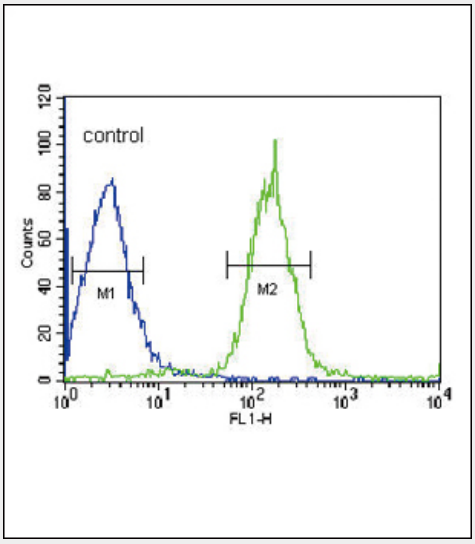


PLA2G6 Antibody (Center) (Cat. #AP9938c) IHC analysis in formalin fixed and paraffin embedded testis carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PLA2G6 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



PLA2G6 Antibody (Center) (Cat. #AP9938c) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

PLA2G6 Antibody (Center) - Background

The protein encoded by this gene is an A2 phospholipase, a class of enzyme that catalyzes the release of fatty acids from phospholipids. The encoded protein may play a role in phospholipid remodelling, arachidonic acid release, leukotriene and prostaglandin synthesis, fas-mediated apoptosis, and transmembrane ion flux in glucose-stimulated B-cells.

PLA2G6 Antibody (Center) - References

Ayilavarapu, S., et al. J. Immunol. 184(3):1507-1515(2010) Guey, L.T., et al. Eur. Urol. 57(2):283-292(2010) Tan, E.K., et al. Ann. Neurol. 67 (1), 148 (2010) Hosgood, H.D. III, et al. Respir Med 103(12):1866-1870(2009)