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PLA2G6 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP9938c

Specification

PLA2G6 Antibody (Center) Blocking Peptide - Product Information

Primary Accession O60733

PLA2G6 Antibody (Center) Blocking Peptide - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PLA2G6 Antibody (Center) Blocking Peptide - 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:10092647, PubMed:10336645, PubMed:20886109, PubMed:9417066). 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) Blocking Peptide - Protocols

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

- Blocking Peptides

PLA2G6 Antibody (Center) Blocking Peptide - Images

PLA2G6 Antibody (Center) Blocking Peptide - 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) Blocking Peptide - 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)