

Recombinant Mouse Pla2g6 Protein, Myc/DDK-tagged

Cat. No. Pla2g6-4903M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length phospholipase A2, group VI (Pla2g6), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	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. 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. Can further hydrolyze lysophospholipids carrying saturated fatty acyl chains (lysophospholipase activity). Upon oxidative stress, contributes to remodeling of mitochondrial phospholipids in pancreatic beta cells, in a repair mechanism to reduce oxidized lipid content. Preferentially hydrolyzes oxidized polyunsaturated fatty acyl chains from cardiolipins, yielding monolysocardiolipins that can be reacylated with unoxidized fatty acyls to regenerate native cardiolipin species. Hydrolyzes oxidized glycerophosphoethanolamines present in pancreatic islets, releasing oxidized polyunsaturated fatty acids such as hydroxyeicosatetraenoates (HETEs). 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. Plays a role

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

in regulation of membrane dynamics and homeostasis. Selectively hydrolyzes sn-2 arachidonoyl group in plasmalogen phospholipids, structural components of lipid rafts and myelin. Regulates F-actin polymerization at the pseudopods, which is required for both speed and directionality of MCP1/CCL2-induced monocyte chemotaxis. 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. 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 proinflammatory signaling lipid. In response to glucose, amplifies calcium influx in pancreatic beta cells to promote INS secretion

Molecular Mass	83.7 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Pla2g6 phospholipase A2, group VI [<i>Mus musculus</i> (house mouse)]
Official Symbol	Pla2g6
Synonyms	PLA2G6; phospholipase A2, group VI; 85 kDa calcium-independent phospholipase

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A2; GVI PLA2; cal-PLA2; group VI phospholipase A2; iPLA2; BB112799; iPLA2beta;
iPLA(2)beta

Gene ID [53357](#)

mRNA Refseq [NM_016915](#)

Protein Refseq [NP_058611](#)

UniProt ID [P97819](#)

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