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PLA2G2A Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21958a

Product Information

Application	WB, E
Primary Accession	P14555
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB54532
Calculated MW	16083

Additional Information

Gene ID	5320
Other Names	Phospholipase A2, membrane associated, 3.1.1.4, GIIC sPLA2, Group IIA phospholipase A2, Non-pancreatic secretory phospholipase A2, NPS-PLA2, Phosphatidylcholine 2-acylhydrolase 2A, PLA2G2A, PLA2B, PLA2L, RASF-A
Target/Specificity	This PLA2G2A antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 32-62 amino acids from human PLA2G2A.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	PLA2G2A Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PLA2G2A
Synonyms	PLA2B, PLA2L, RASF-A
Function	Secretory calcium-dependent phospholipase A2 that primarily targets extracellular phospholipids with implications in host antimicrobial defense,

	inflammatory response and tissue regeneration (PubMed:10455175, PubMed:10681567, PubMed:2925633). Hydrolyzes the ester bond of the fatty acyl group attached at sn-2 position of phospholipids (phospholipase A2 activity) with preference for phosphatidylethanolamines and phosphatidylglycerols over phosphatidylcholines (PubMed:10455175, PubMed:10681567). Contributes to lipid remodeling of cellular membranes and generation of lipid mediators involved in pathogen clearance. Displays bactericidal activity against Gram-positive bacteria by directly hydrolyzing phospholipids of the bacterial membrane (PubMed:10358193, PubMed:11694541). Upon sterile inflammation, targets membrane phospholipids of extracellular mitochondria released from activated platelets, generating free unsaturated fatty acids such as arachidonate that is used by neighboring leukocytes to synthesize inflammatory eicosanoids such as leukotrienes. Simultaneously, by compromising mitochondrial membrane integrity, promotes the release in circulation of potent damage-associated molecular pattern molecules that activate the innate immune response (PubMed:25082876). Plays a stem cell regulator role in the intestinal crypt. Within intracellular compartment mediates Paneth cell differentiation and its stem cell supporting functions by inhibiting Wnt signaling pathway in intestinal stem cell (ICS). Secreted in the intestinal lumen upon inflammation, acts in an autocrine way and promotes prostaglandin E2 synthesis that stimulates Wnt signaling pathway in ICS cells and tissue regeneration (By similarity). May play a role in the biosynthesis of N-acyl ethanolamines that regulate energy metabolism and inflammation. Hydrolyzes N-acyl phosphatidylethanolamines to N-acyl lysophosphatidylethanolamines, which are further cleaved by a lysophospholipase D to release N-acyl ethanolamines (PubMed:14998370). Independent of its catalytic activity, acts as a ligand for integrins (PubMed:18635536, PubMed:25398877). Binds to and activates integrins ITGAV:ITGB3, ITGA4:ITGB1 and ITGA5:ITGB1 (PubMed:18635536, PubMed:25398877). Binds to a site (site 2) which is distinct from the classical ligand-binding site (site 1) and induces integrin conformational changes and enhanced ligand binding to site 1 (PubMed:25398877). Induces cell proliferation in an integrin-dependent manner (PubMed:18635536).
Cellular Location	Secreted. Cell membrane; Peripheral membrane protein. Mitochondrion outer membrane; Peripheral membrane protein
Tissue Location	Expressed in various tissues including heart, kidney, liver, lung, pancreas, placenta, skeletal muscle, prostate, ovary, colon and small intestine. Not detected in lymphoid organs and brain (PubMed:10455175, PubMed:10681567). Expressed in platelets (at protein level) (PubMed:25082876).

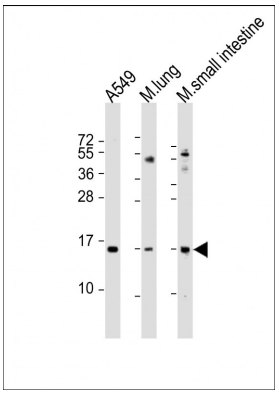
Background

Thought to participate in the regulation of the phospholipid metabolism in biomembranes including eicosanoid biosynthesis. Catalyzes the calcium-dependent hydrolysis of the 2- acyl groups in 3-sn-phosphoglycerides.

References

Seilhamer J.J.,et al.J. Biol. Chem. 264:5335-5338(1989).
Kramer R.M.,et al.J. Biol. Chem. 264:5768-5775(1989).
Kramer R.M.,et al.Adv. Exp. Med. Biol. 275:35-53(1990).
Liang N.S.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.

Images



All lanes : Anti-PLA2G2A Antibody (N-Term) at 1:2000 dilution Lane 1: A549 whole cell lysate Lane 2: mouse lung lysate Lane 3: mouse small intestine lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 16 kDa Blocking/Dilution buffer: 5% NFDM/TBST.