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PLA2G2A Rabbit pAb

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Catalog # AP57800

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P31482
Reactivity	Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	16145
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse PLA2G2A
Epitope Specificity	23-100/146
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	Preservative: 0.02% Proclin300, Constituents: 1% BSA, 0.01M PBS, pH7.4.
SUBCELLULAR LOCATION	Membrane.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a member of the phospholipase A2 family (PLA2). PLA2s constitute a diverse family of enzymes with respect to sequence, function, localization, and divalent cation requirements. This gene product belongs to group II, which contains secreted form of PLA2, an extracellular enzyme that has a low molecular mass and requires calcium ions for catalysis. It catalyzes the hydrolysis of the sn-2 fatty acid acyl ester bond of phosphoglycerides, releasing free fatty acids and lysophospholipids, and thought to participate in the regulation of the phospholipid metabolism in biomembranes. Several alternatively spliced transcript variants with different 5' UTRs have been found for this gene.[provided by RefSeq, Sep 2009]

Additional Information

Gene ID	18780
Other Names	Phospholipase A2, membrane associated, 3.1.1.4, Enhancing factor, EF, GIIC sPLA2, Group IIA phospholipase A2, Phosphatidylcholine 2-acylhydrolase 2A, Pla2g2a
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

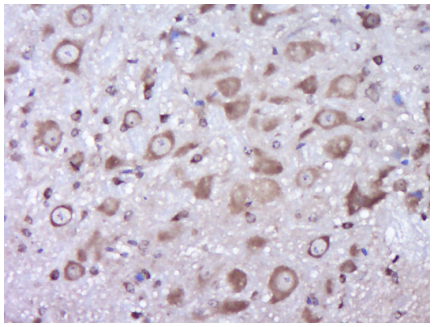
Name	Pla2g2a
Function	Secretory calcium-dependent phospholipase A2 that primarily targets extracellular phospholipids with implications in host antimicrobial defense, inflammatory response and tissue regeneration (PubMed:10358193, PubMed:11694541, PubMed:8425615). Hydrolyzes the ester bond of the fatty acyl group attached at sn-2 position of phospholipids (phospholipase A2 activity) with preference for phosphatidylethanolamines and phosphatidylglycerols over phosphatidylcholines. 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: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 (By similarity). 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 (PubMed:27292189). 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 (By similarity). Independent of its catalytic activity, acts as a ligand for integrins. Binds to and activates integrins ITGAV:ITGB3, ITGA4:ITGB1 and ITGA5:ITGB1. 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. Induces cell proliferation in an integrin-dependent manner (By similarity).
Cellular Location	Secreted {ECO:0000250|UniProtKB:P14555}. Cell membrane {ECO:0000250|UniProtKB:P14555}; Peripheral membrane protein {ECO:0000250|UniProtKB:P14555}. Mitochondrion outer membrane {ECO:0000250|UniProtKB:P14555}; Peripheral membrane protein {ECO:0000250|UniProtKB:P14555}
Tissue Location	Mainly in the Paneth cells adjacent to the stem population in the small intestines.

Background

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Images

Paraformaldehyde-fixed, paraffin embedded (Mouse



brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Secretory phospholipase A2) Polyclonal Antibody, Unconjugated (AP57800) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.