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PLA2G2A Blocking Peptide (N-Term)

Synthetic peptide
Catalog # BP21958a

Specification

PLA2G2A Blocking Peptide (N-Term) - Product Information

Primary Accession P14555

PLA2G2A Blocking Peptide (N-Term) - 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
The synthetic peptide sequence is selected from aa 52-62 of HUMAN PLA2G2A

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.

PLA2G2A Blocking Peptide (N-Term) - Protein Information

Name PLA2G2A

Synonyms PLA2B, PLA2L, RASF-A

Function

PLA2G2A Blocking Peptide (N-Term) - 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.

PLA2G2A Blocking Peptide (N-Term) - 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.

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:11694541, PubMed:10358193). 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).

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PLA2G2A Blocking Peptide (N-Term) - Protocols

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

- Blocking Peptides