

PLA2G3 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18856b

Specification

PLA2G3 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	O9NZ20
Other Accession	NP_056530.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	57167
Antigen Region	446-474

PLA2G3 Antibody (C-term) - Additional Information

Gene ID 50487

Other Names

Group 3 secretory phospholipase A2, Group III secretory phospholipase A2, GIII sPLA2, sPLA2-III, Phosphatidylcholine 2-acylhydrolase 3, PLA2G3

Target/Specificity

This PLA2G3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 446-474 amino acids from the C-terminal region of human PLA2G3.

Dilution

WB~~1:1000

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

PLA2G3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PLA2G3 Antibody (C-term) - Protein Information

Name PLA2G3 ([HGNC:17934](#))

Function Secretory calcium-dependent phospholipase A2 that primarily targets extracellular phospholipids. Hydrolyzes the ester bond of the fatty acyl group attached at sn-2 position of phospholipids without apparent head group selectivity (PubMed:[12522102](#), PubMed:[15863501](#), PubMed:[18801741](#), PubMed:[28947740](#)). Contributes to phospholipid remodeling of low-density lipoprotein (LDL) and high-density lipoprotein (HDL) particles. Hydrolyzes LDL phospholipids releasing unsaturated fatty acids that regulate macrophage differentiation toward foam cells (PubMed:[18801741](#)). May act in an autocrine and paracrine manner (PubMed:[23624557](#)). Secreted by immature mast cells, acts on nearby fibroblasts upstream to PTGDS to synthesize prostaglandin D2 (PGD2), which in turn promotes mast cell maturation and degranulation via PTGDR (PubMed:[23624557](#)). Secreted by epididymal epithelium, acts on immature sperm cells within the duct, modulating the degree of unsaturation of the fatty acyl components of phosphatidylcholines required for acrosome assembly and sperm cell motility. Facilitates the replacement of fatty acyl chains in phosphatidylcholines in sperm membranes from omega-6 and omega-9 to omega-3 polyunsaturated fatty acids (PUFAs). Coupled to lipoxygenase pathway, may process omega-6 PUFAs to generate oxygenated lipid mediators in the male reproductive tract (By similarity). At pericentrosomal preciliary compartment, negatively regulates ciliogenesis likely by regulating endocytotic recycling of ciliary membrane protein (PubMed:[20393563](#)). Coupled to cyclooxygenase pathway provides arachidonate to generate prostaglandin E2 (PGE2), a potent immunomodulatory lipid in inflammation and tumorigenesis (PubMed:[12522102](#), PubMed:[15863501](#)). At colonic epithelial barrier, preferentially hydrolyzes phospholipids having arachidonate and docosahexaenoate at sn-2 position, contributing to the generation of oxygenated metabolites involved in colonic stem cell homeostasis (PubMed:[28947740](#)). Releases C16:0 and C18:0 lysophosphatidylcholine subclasses from neuron plasma membranes and promotes neurite outgrowth and neuron survival (PubMed:[17868035](#)).

Cellular Location

Secreted. Cell membrane. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Recycling endosome. Note=Localized at pericentrosomal preciliary compartment.

Tissue Location

Expressed in kidney, heart, liver, and skeletal muscle. Also present in placenta and peripheral blood leukocytes. Not detected in colon, thymus, spleen and small intestine. In lung, expressed in bronchial epithelial cells and alveolar macrophages, but scarcely detected in alveolar epithelium, arterial walls and interstitial fibroblasts (at protein level). In joints of osteoarthritis and rheumatoid arthritis, expressed in endothelial cells (at protein level). In normal heart, detected in some vessels. In myocardial tissues with acute infarction, expressed in vascular endothelial cells adjacent to cardiomyocytes and those in lesions with granulation. Expression in cardiomyocytes is scarce (at protein level) In uterus, breast and colon cancers, detected in tumor cells and neighboring microvascular endothelium, but not in normal glandular tissues (at protein level) (PubMed:[15863501](#)). Expressed in dermal resting mast cells (at protein level) and pulmonary mast cells (PubMed:[23624557](#)). Expressed in neuronal fibers (at protein level) (PubMed:[17868035](#)). Highly expressed in dorsal root ganglia neurons (at protein level) (PubMed:[17868035](#)). Expressed in Purkinje cells in cerebellum (at protein level) (PubMed:[17868035](#)). In stomach is preferentially expressed in neuronal fibers and in microvascular endothelium (PubMed:[17868035](#)). Sparsely expressed in normal aorta (at protein level). Highly expressed in macrophages and smooth muscle cells in aorta with atheroma (PubMed:[18801741](#)).

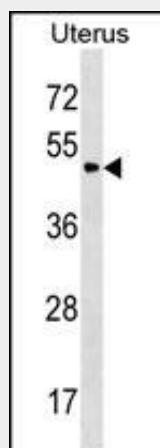
PLA2G3 Antibody (C-term) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PLA2G3 Antibody (C-term) - Images



PLA2G3 Antibody (C-term)(Cat. #AP18856b) western blot analysis in Uterus tissue lysates (35ug/lane). This demonstrates the PLA2G3 antibody detected the PLA2G3 protein (arrow).

PLA2G3 Antibody (C-term) - Background

PLA2G3 belongs to the family of secreted phospholipase A2 (sPLA2; EC 3.1.1.4) proteins. These Ca(2+)-dependent lipolytic enzymes have a conserved Ca(2+)-binding loop and a his-aspartate dyad in the catalytic site (Murakami et al., 2003 [PubMed 12522102]).

PLA2G3 Antibody (C-term) - References

Wang, G., et al. J. Neurochem. 114(4):1039-1048(2010) Yoshida, T., et al. Int. J. Mol. Med. 25(4):649-656(2010) Segat, L., et al. Vaccine 28(10):2201-2206(2010) Oguri, M., et al. Am. J. Hypertens. 23(1):70-77(2010) Sato, H., et al. Biochem. J. 421(1):17-27(2009)