

PLA2G5 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP14763b**Specification**

PLA2G5 Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P39877](#)**PLA2G5 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 5322**Other Names**

Calcium-dependent phospholipase A2, Group V phospholipase A2, PLA2-10, Phosphatidylcholine 2-acylhydrolase 5, PLA2G5

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.

PLA2G5 Antibody (C-term) Blocking Peptide - Protein Information**Name** PLA2G5**Function**

Secretory calcium-dependent phospholipase A2 that primarily targets extracellular phospholipids (PubMed:8300559). Hydrolyzes the ester bond of the fatty acyl group attached at sn-2 position of phospholipids (phospholipase A2 activity), preferentially releasing fatty acyl groups with a low degree of unsaturation such as oleoyl (C18:1) and linoleoyl (C18:2) groups (PubMed:14998370, PubMed:23533611, PubMed:8300559). Hydrolyzes low-density lipoprotein (LDL) phospholipids releasing unsaturated fatty acids that drive macrophage polarization toward an M2 phenotype (By similarity). May act in an autocrine and paracrine manner. Contributes to lipid remodeling of cellular membranes at different subcellular locations and generation of lipid mediators involved in pathogen clearance. Cleaves sn-2 fatty acyl chains of cardiolipin, a major component of the inner membrane of mitochondria and bacterial membranes (PubMed:23533611). Promotes phagocytosis of bacteria in macrophages through production of lysophosphatidylethanolamines (PubMed:25725101). Displays

bactericidal activity against Gram-positive bacteria by directly hydrolyzing phospholipids of the bacterial membrane (PubMed:11694541). Promotes phagocytosis and killing of ingested fungi likely through controlling phagosome-lysosome fusion and phagosome maturation (By similarity). Plays a role in biosynthesis of cysteinyl leukotrienes (CysLTs) in myeloid cells (PubMed:12124392, PubMed:12796497). In eosinophils, triggers perinuclear arachidonate release and LTC4 synthesis in a PLA2G4A-independent way (PubMed:12796497). In neutrophils, amplifies CysLTs biosynthesis initiated by PLA2G4A (PubMed:12124392). Promotes immune complex clearance in macrophages via stimulating synthesis of CysLTs, which act through CYSLTR1 to trigger phagocytosis (By similarity). May regulate antigen processing in antigen-presenting cells (By similarity). In pulmonary macrophages regulates IL33 production required for activation of group 2 innate lymphoid cells (By similarity). May play a role in the biosynthesis of N-acyl ethanolamines that regulate energy metabolism. Hydrolyzes N-acyl phosphatidylethanolamines to N-acyl lysophosphatidylethanolamines, which are further cleaved by a lysophospholipase D to release N-acyl ethanolamines (PubMed:14998370).

Cellular Location

Secreted. Cell membrane {ECO:0000250|UniProtKB:P97391}. Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:P97391}. Recycling endosome {ECO:0000250|UniProtKB:P97391}. Golgi apparatus, cis-Golgi network {ECO:0000250|UniProtKB:P97391}. Golgi apparatus, trans-Golgi network {ECO:0000250|UniProtKB:P97391}

Tissue Location

Heart, placenta and less abundantly, in lung. Detected in the outer and inner plexiform layers of the retina (at protein level) (PubMed:22137173). Expressed in monocytes and macrophages (PubMed:25725101).

PLA2G5 Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

PLA2G5 Antibody (C-term) Blocking Peptide - Images

PLA2G5 Antibody (C-term) Blocking Peptide - Background

This gene is a member of the secretory phospholipase A2 family. It is located in a tightly-linked cluster of secretory phospholipase A2 genes on chromosome 1. The encoded enzyme catalyzes the hydrolysis of membrane phospholipids to generate lysophospholipids and free fatty acids including arachidonic acid. It preferentially hydrolyzes linoleoyl-containing phosphatidylcholine substrates. Secretion of this enzyme is thought to induce inflammatory responses in neighboring cells. Alternatively spliced transcript variants have been found, but their full-length nature has not been determined. [provided by RefSeq].

PLA2G5 Antibody (C-term) Blocking Peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Chattopadhyay, I., et al. Mutat. Res. 696(2):130-138(2010) Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009) Wootton, P.T., et al. Hum. Mol. Genet. 16(12):1437-1444(2007) de Beer, F.C., et al. Arterioscler. Thromb. Vasc. Biol. 26(7):1421-1422(2006)