C-PLA2 Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	c-PLA2 (PLA2G4A), Blocking Peptide
Full Product Name	c-PLA2 Blocking Peptide
Product Gene Name	PLA2G4A blocking peptide
Product Synonym Names	Calcium dependent phospholipid binding protein; CPLA 2; cPLA2 alpha; cPLA2; Cytosolic phospholipase A2; Cytosolic phospholipase A2 group IVA; Lysophospholipase; MGC126350; PA24A_HUMAN; Phosphatidylcholine 2 acylhydrolase; Phosphatidylcholine 2-acylhydrolase; Phospholipase A2 group 4 A; Phospholipase A2 group IVA (cytosolic calcium dependent); Phospholipase A2 group IVA; PhospholipaseA2; PLA2G4; pla2g4a
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	c-PLA2 peptide (MBS9617451) is used for blocking the activity of c-PLA2 antibody (MBS9601898)
Molecular Weight	85,239 Da
OMIM	600522
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for PLA2G4A blocking peptide	Blocking/Control
Related Product Information for PLA2G4A blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of PLA2G4A blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PLA2G4A purchase	MBS9617451 is a blocking peptide targeting PLA2G4A. Also known as c-PLA2 Blocking Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PLA2G4A. It may not necessarily be applicable to this product.

NCBI GI #	909618051
NCBI GeneID	5321
NCBI Accession #	NP_001298122.1
UniProt Primary Accession #	P47712

UniProt Secondary Accession #	Q29R80; B1AKG4
UniProt Related Accession #	P47712
GenBank Nucleotide #	NM_001311193.1
NCBI Official Full Name	cytosolic phospholipase A2 isoform 2
NCBI Official Synonym Full Names	phospholipase A2 group IVA
NCBI Official Symbol	PLA2G4A
NCBI Official Synonym Symbols	cPLA2; PLA2G4; cPLA2-alpha
UniProt Protein Name	Cytosolic phospholipase A2
UniProt Synonym Protein Names	Phospholipase A2 group IVAIncluding the following 2 domains:Phospholipase A2 (EC:3.1.1.4)Alternative name(s):Phosphatidylcholine 2-acylhydrolase
Protein Family	Cytosolic phospholipase
UniProt Gene Name	PLA2G4A
UniProt Synonym Gene Names	CPLA2; PLA2G4; cPLA2
UniProt Entry Name	PA24A_HUMAN
NCBI Protein Information	cytosolic phospholipase A2
NCBI Summary for PLA2G4A	This gene encodes a member of the cytosolic phospholipase A2 group IV family. The enzyme catalyzes the hydrolysis of membrane phospholipids to release arachidonic acid which is subsequently metabolized into eicosanoids. Eicosanoids, including prostaglandins and leukotrienes, are lipid-based cellular hormones that regulate hemodynamics, inflammatory responses, and other intracellular pathways. The hydrolysis reaction also produces lysophospholipids that are converted into platelet-activating factor. The enzyme is activated by increased intracellular Ca(2+) levels and phosphorylation, resulting in its translocation from the cytosol and nucleus to perinuclear membrane vesicles. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2015]
UniProt Comments for PLA2G4A	cPLA2: a calcium-dependent phospholipase A2 that catalyzes the release of arachidonic acid from membrane phospholipids. Selectively hydrolyzes arachidonyl phospholipids in the sn-2 position releasing arachidonic acid. Arachidonic acid is a precursor for the eicosanoids that are involved in hemodynamic regulation, inflammatory responses, and other cellular processes. Promotes cerebellar long-term depression and motor learning. Translocates to the Golgi and endoplasmic reticulum in a calcium-dependent fashion. Translocation and activation of at the ER facilitates the process of ER stress. Regulates the biogenesis of lipid droplets, a process dependent on JNK and ceramide kinase. Stimulated by agonists such as ATP, EGF, thrombin and bradykinin as well as by cytosolic Ca2+. The N-terminal C2 domain, by its association with lipid membranes, mediates the regulation of CPLA2 by presenting the active site to its substrate in response to elevations of cytosolic Ca2+. Inhibited when in trimolecular complex with ANXA2 and S100A10. Phosphorylation of S727 relieves this inhibitory interaction, thus activating PLA2G4A. Protein type: Lipid Metabolism - ether lipid; EC 3.1.1.4; Lipid Metabolism - glycerophospholipid; Lipid Metabolism - arachidonic acid; EC 3.1.1.5; Phospholipase; Lipid Metabolism - linoleic acid; Lipid Metabolism - alpha-linolenic acid Chromosomal Location of Human Ortholog: 1q25 Cellular Component: Golgi apparatus; endoplasmic reticulum membrane; cytoplasm; cytoplasmic membrane-bound vesicle; mitochondrial inner membrane; cytosol Molecular Function: phospholipase A2 activity; calcium-dependent phospholipase A2 activity; calcium-dependent phospholipid binding; calcium ion binding; lysophospholipase activity Biological Process: icosanoid biosynthetic process; platelet activating factor biosynthetic process; platelet activation; phospholipid catabolic process; phospholipid metabolic process; glycerophospholipid biosynthetic process; icosanoid metabolic process; phosphatidic acid biosynthetic process; arachidonic acid metabolic process; arachidonic acid secretion; blood coagulation; regulation of cell proliferation

Research Articles on PLA2G4A	**1.** Letter: report instability of cytosolic phospholipase A2alpha variant resulting in severe impairment in platelet arachidonic acid metabolism.
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