PLA2G4A Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PLA2G4A, Polyclonal Antibody
Full Product Name	PLA2G4A (pS505) Antibody
Product Gene Name	anti-PLA2G4A antibody
Product Synonym Names	CPLA2; PLA2G4; Cytosolic phospholipase A2; cPLA2; Phospholipase A2 group IVA
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Monkey
Form/Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH7.3, 30% glycerol, and 0.01% sodium azide.
Purity/Purification	The antibody was purified by immunogen affinity chromatography.
Specificity	Recognizes endogenous levels of PLA2G4A (pS505) protein.
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C for one year. Avoid freeze/thaw cycles.
Molecular Weight	110kDa
Chromosome Location	Chromosome: 1; NC_000001.10 (186798032..186958113). Location: 1q25
OMIM	600522
3D Structure	ModBase 3D Structure for P47712
Immunogen	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human PLA2G4A (pS505). The exact sequence is proprietary.
Product Categories/Family for anti-PLA2G4A antibody	Primary Antibody
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-PLA2G4A antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC)
Application Notes for anti-PLA2G4A antibody	WB: 1:500-1:1000 IHC: 1:50-1:200
Related Product Information for anti-PLA2G4A antibody	MBS8581860 is an antibody targeting PLA2G4A. Also known as PLA2G4A (pS505) Antibody. Reactive in Human, Mouse, Monkey. Host: Rabbit. Rabbit polyclonal antibody to PLA2G4A (pS505)
Other Notes	Small volumes of anti-PLA2G4A antibody 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.

ADDITIONAL DETAILS

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

NCBI GI #	23943920
NCBI GeneID	5321

NCBI Accession #	NP_077734.1
UniProt Primary Accession #	P47712
UniProt Secondary Accession #	Q29R80; B1AKG4
UniProt Related Accession #	P47712
GenBank Nucleotide #	NM_024420.2
NCBI Official Full Name	cytosolic phospholipase A2
NCBI Official Synonym Full Names	phospholipase A2, group IVA (cytosolic, calcium-dependent)
NCBI Official Symbol	PLA2G4A
NCBI Official Synonym Symbols	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; cPLA2; lysophospholipase; phospholipase A2 group IVA; phosphatidylcholine 2-acylhydrolase; calcium-dependent phospholipid-binding protein
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. [provided by RefSeq, Jul 2008]

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.** results suggest that C2-di-ethyl-ceramide-1-phosphate appeared to inhibit cPLA(2)alpha, probably by interaction with a site in the catalytic domain of the enzyme.
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