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cPLA2 Polyclonal Antibody

Catalog # AP73359

Product Information

Application	WB, IHC-P
Primary Accession	P47712
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	85239

Additional Information

Gene ID	5321
Other Names	PLA2G4A; CPLA2; PLA2G4; Cytosolic phospholipase A2; cPLA2; Phospholipase A2 group IVA
Dilution	WB~~Western Blot: 1/500 - 1/2000. IHC-p: 1:100-300 ELISA: 1/20000. Not yet tested in other applications. IHC-P~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

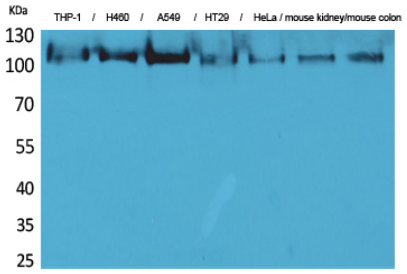
Name	PLA2G4A
Synonyms	CPLA2, PLA2G4
Function	Has primarily calcium-dependent phospholipase and lysophospholipase activities, with a major role in membrane lipid remodeling and biosynthesis of lipid mediators of the inflammatory response (PubMed:10358058, PubMed:14709560, PubMed:16617059, PubMed:17472963, PubMed:18451993, PubMed:27642067, PubMed:7794891, PubMed:8619991, PubMed:8702602, PubMed:9425121). Plays an important role in embryo implantation and parturition through its ability to trigger prostanoid production (By similarity). Preferentially hydrolyzes the ester bond of the fatty acyl group attached at sn-2 position of phospholipids (phospholipase A2 activity) (PubMed:10358058, PubMed:17472963, PubMed:18451993, PubMed:7794891, PubMed:8619991, PubMed:9425121). Selectively hydrolyzes sn-2 arachidonoyl group from membrane phospholipids, providing the precursor for eicosanoid biosynthesis via the cyclooxygenase pathway (PubMed:10358058, PubMed:17472963, PubMed:18451993, PubMed:7794891, PubMed:9425121). In an alternative pathway of eicosanoid

	biosynthesis, hydrolyzes sn-2 fatty acyl chain of eicosanoid lysophopholipids to release free bioactive eicosanoids (PubMed:27642067). Hydrolyzes the ester bond of the fatty acyl group attached at sn-1 position of phospholipids (phospholipase A1 activity) only if an ether linkage rather than an ester linkage is present at the sn-2 position. This hydrolysis is not stereospecific (PubMed:7794891). Has calcium-independent phospholipase A2 and lysophospholipase activities in the presence of phosphoinositides (PubMed:12672805). Has O-acyltransferase activity. Catalyzes the transfer of fatty acyl chains from phospholipids to a primary hydroxyl group of glycerol (sn-1 or sn-3), potentially contributing to monoacylglycerol synthesis (PubMed:7794891).
Cellular Location	Cytoplasm. Golgi apparatus membrane. Nucleus envelope Note=Translocates to intracellular membranes in a calcium-dependent way.
Tissue Location	Expressed in various cells and tissues such as macrophages, neutrophils, fibroblasts and lung endothelium. Expressed in platelets (at protein level) (PubMed:25102815)

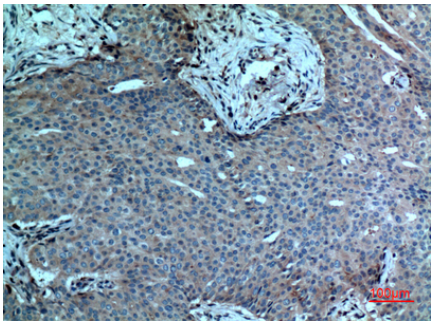
Background

Selectively hydrolyzes arachidonyl phospholipids in the sn-2 position releasing arachidonic acid. Together with its lysophospholipid activity, it is implicated in the initiation of the inflammatory response.

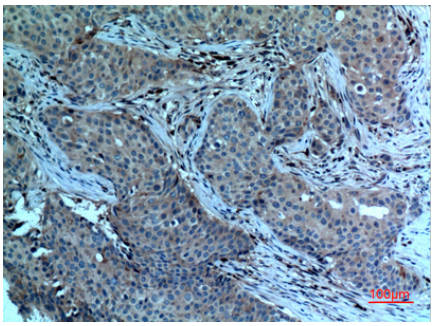
Images



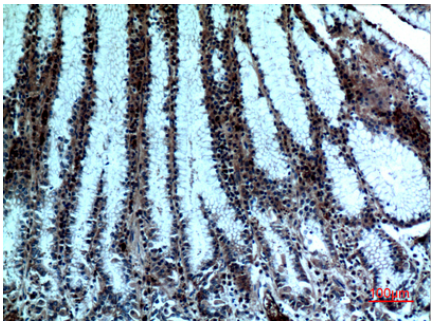
Western Blot analysis of THP-1, H460, A549, HT29, HeLa, mouse kidney, mouse colon cells using cPLA2 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



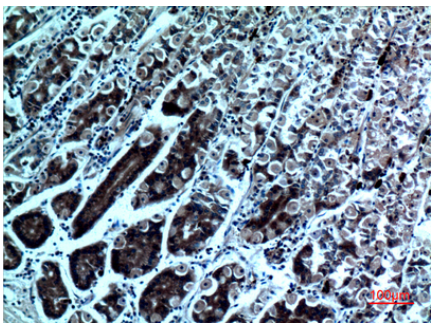
Immunohistochemical analysis of paraffin-embedded human-breast-cancer, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded human-breast-cancer, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded human-stomach, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded human-stomach, antibody was diluted at 1:100