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PLA2G7 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9819C

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q13093
Reactivity	Human, Mouse
Predicted	Bovine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21322
Calculated MW	50077
Antigen Region	200-228

Additional Information

Gene ID	7941
Other Names	Platelet-activating factor acetylhydrolase, PAF acetylhydrolase, 1-alkyl-2-acetylglycerophosphocholine esterase, 2-acetyl-1-alkylglycerophosphocholine esterase, Group-VIIA phospholipase A2, gVIIA-PLA2, LDL-associated phospholipase A2, LDL-PLA(2), PAF 2-acylhydrolase, PLA2G7, PAFAH
Target/Specificity	This PLA2G7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 200-228 amino acids from the Central region of human PLA2G7.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:25 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	PLA2G7 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PLA2G7

Synonyms	PAFAH
Function	Lipoprotein-associated calcium-independent phospholipase A2 involved in phospholipid catabolism during inflammatory and oxidative stress response (PubMed:10066756, PubMed:16371369, PubMed:17090529, PubMed:2040620, PubMed:7700381, PubMed:8624782). At the lipid-aqueous interface, hydrolyzes the ester bond of fatty acyl group attached at sn-2 position of phospholipids (phospholipase A2 activity) (PubMed:10504265, PubMed:2040620). Specifically targets phospholipids with a short-chain fatty acyl group at sn-2 position (PubMed:2040620). Can hydrolyze phospholipids with long fatty acyl chains, only if they carry oxidized functional groups (PubMed:2040620, PubMed:8624782). Hydrolyzes and inactivates platelet-activating factor (PAF, 1-O-alkyl-2-acetyl-sn-glycero-3-phosphocholine), a potent pro-inflammatory signaling lipid that acts through PTAFR on various innate immune cells (PubMed:10066756, PubMed:10504265, PubMed:11590221, PubMed:16371369, PubMed:18434304, PubMed:7592717, PubMed:7700381, PubMed:8624782, PubMed:8675689). Hydrolyzes oxidatively truncated phospholipids carrying an aldehyde group at omega position, preventing their accumulation in low-density lipoprotein (LDL) particles and uncontrolled pro-inflammatory effects (PubMed:2040620, PubMed:7700381). As part of high-density lipoprotein (HDL) particles, can hydrolyze phospholipids having long-chain fatty acyl hydroperoxides at sn-2 position and protect against potential accumulation of these oxylipins in the vascular wall (PubMed:17090529). Catalyzes the release from membrane phospholipids of F2-isoprostanes, lipid biomarkers of cellular oxidative damage (PubMed:16371369).
Cellular Location	Secreted, extracellular space Note=Associates with both LDL and HDL particles in plasma (PubMed:10066756, PubMed:11590221, PubMed:12821559, PubMed:18434304) Mainly associates with pro-inflammatory electronegative LDL particles (PubMed:12821559).
Tissue Location	Plasma (PubMed:11590221, PubMed:12821559). Secreted by macrophages (at protein level) (PubMed:11590221)

Background

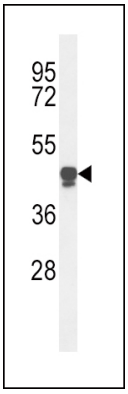
The protein encoded by this gene is a secreted enzyme that catalyzes the degradation of platelet-activating factor to biologically inactive products. Defects in this gene are a cause of platelet-activating factor acetylhydrolase deficiency.

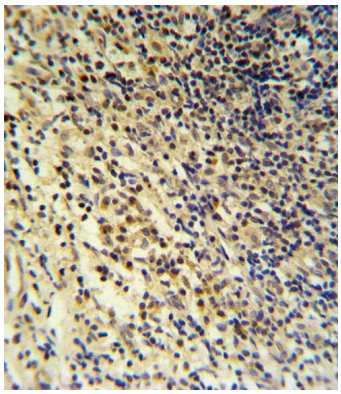
References

Fan, P., et al. Hum. Reprod. 25(5):1288-1294(2010)
Paik, J.K., et al. Clin. Chim. Acta 411 (7-8), 486-493 (2010)
Meng, X., et al. Psychiatry Res 175 (1-2), 186-187 (2010)
McGeachie, M., et al. Circulation 120(24):2448-2454(2009)
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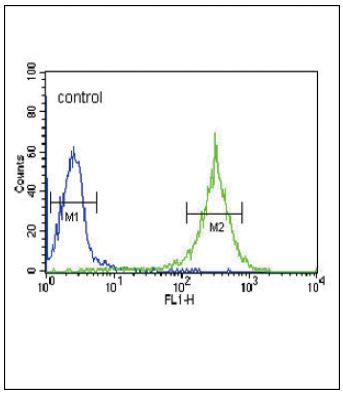
Images

Western blot analysis of PLA2G7 Antibody (Center) (Cat. #AP9819c) in HL-60 cell line lysates (35ug/lane). PLA2G7 (arrow) was detected using the purified Pab.





PLA2G7 Antibody (Center) (Cat. #AP9819c) IHC analysis in formalin fixed and paraffin embedded tonsil followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PLA2G7 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



PLA2G7 Antibody (Center) (Cat. #AP9819c) flow cytometric analysis of HL-60 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Autotaxin Derived From Lipoprotein(a) and Valve Interstitial Cells Promotes Inflammation and Mineralization of the Aortic Valve.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.