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PNPLA8 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50621

Product Information

Application	WB
Primary Accession	Q9NP80
Reactivity	Human, Mouse
Host	Rabbit
Clonality	polyclonal
Calculated MW	88477

Additional Information

Gene ID	50640
Other Names	Calcium-independent phospholipase A2-gamma, Intracellular membrane-associated calcium-independent phospholipase A2 gamma, iPLA2-gamma, PNPLA-gamma, Patatin-like phospholipase domain-containing protein 8, iPLA2-2, PNPLA8, IPLA22, IPLA2G
Dilution	WB~~ 1:1000
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

Protein Information

Name	PNPLA8 (HGNC:28900)
Synonyms	IPLA22, IPLA2G
Function	Calcium-independent and membrane-bound phospholipase, that catalyzes the esterolytic cleavage of fatty acids from glycerophospholipids to yield free fatty acids and lysophospholipids, hence regulating membrane physical properties and the release of lipid second messengers and growth factors (PubMed:10744668, PubMed:10833412, PubMed:15695510, PubMed:15908428, PubMed:17213206, PubMed:18171998, PubMed:28442572). Hydrolyzes phosphatidylethanolamine, phosphatidylcholine and probably phosphatidylinositol with a possible preference for the former (PubMed:15695510). Also has a broad substrate specificity in terms of fatty acid moieties, hydrolyzing saturated and mono-unsaturated fatty acids at nearly equal rates from either the sn-1 or sn-2 position in diacyl phosphatidylcholine (PubMed:10744668, PubMed:10833412, PubMed:15695510, PubMed:15908428). However, has a

	weak activity toward polyunsaturated fatty acids at the sn-2 position, and thereby favors the production of 2-arachidonoyl lysophosphatidylcholine, a key branch point metabolite in eicosanoid signaling (PubMed:15908428). On the other hand, can produce arachidonic acid from the sn-1 position of diacyl phospholipid and from the sn-2 position of arachidonate-containing plasmalogen substrates (PubMed:15908428). Therefore, plays an important role in the mobilization of arachidonic acid in response to cellular stimuli and the generation of lipid second messengers (PubMed:15695510, PubMed:15908428). Can also hydrolyze lysophosphatidylcholine (PubMed:15695510). In the mitochondrial compartment, catalyzes the hydrolysis and release of oxidized aliphatic chains from cardiolipin and integrates mitochondrial bioenergetics and signaling. It is essential for maintaining efficient bioenergetic mitochondrial function through tailoring mitochondrial membrane lipid metabolism and composition (PubMed:28442572).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q5XTS1}; Single-pass membrane protein Mitochondrion membrane; Single-pass membrane protein. Peroxisome membrane; Single-pass membrane protein
Tissue Location	Expressed in parenchymal tissues including heart, skeletal muscle, placenta, brain, liver and pancreas. Also expressed in bronchial epithelial cells and kidney. Highest expression is observed in skeletal muscle and heart.

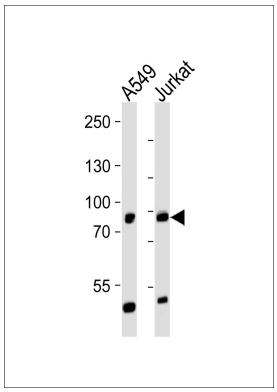
Background

Calcium-independent phospholipase A2, which catalyzes the hydrolysis of the sn-2 position of glycerophospholipids, PtdSer and to a lower extent PtdCho. Cleaves membrane phospholipids.

References

Tanaka H.,et al.Biochem. Biophys. Res. Commun. 272:320-326(2000).
Mancuso D.J.,et al.J. Biol. Chem. 275:9937-9945(2000).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Hillier L.W.,et al.Nature 424:157-164(2003).
Scherer S.W.,et al.Science 300:767-772(2003).

Images



Western blot analysis of lysates from A549,Jurkat cell line (from left to right),using PNPLA8 Antibody(AP50621). AP50621 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysates at 35ug per lane.

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