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Anti-PNPLA8 Antibody

Catalog # AP60102

Product Information

Application	WB
Primary Accession	Q9NP80
Reactivity	Human, Rat, Rabbit, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	88477

Additional Information

Gene ID	50640
Other Names	IPLA22; IPLA2G; 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
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human PNPLA8. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000)
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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).

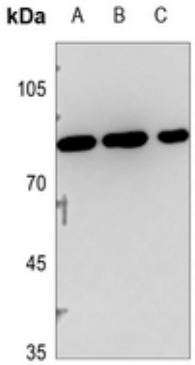
Cellular Location

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.

Images



Western blot analysis of PNPLA8 expression in A549 (A), U2OS (B), H1688 (C) whole cell lysates. (Predicted band size: 88 kD; Observed band size: 88 kD)

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