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LYPLA1 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19062c

Specification

LYPLA1 Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	O75608
Other Accession	P70470, O77821, P97823, NP_006321.1
Reactivity	**Human**
Predicted	**Mouse, Rabbit, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**24670**
Antigen Region	**65-94**

LYPLA1 Antibody (Center) - Additional Information

Gene ID 10434

Other Names
Acyl-protein thioesterase 1, APT-1, hAPT1, 312-, Lysophospholipase 1, Lysophospholipase I, LPL-I, LysoPLA I, LYPLA1, APT1, LPL1

Target/Specificity
This LYPLA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 65-94 amino acids from the Central region of human LYPLA1.

Dilution
WB~~1:1000
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
LYPLA1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

LYPLA1 Antibody (Center) - Protein Information

Name LYPLA1

Synonyms APT1, LPL1

Function Acts as an acyl-protein thioesterase (PubMed:19439193, PubMed:20418879). Hydrolyzes fatty acids from S-acylated cysteine residues in proteins such as trimeric G alpha proteins or HRAS (PubMed:20418879). Acts as a palmitoyl thioesterase that catalyzes depalmitoylation of proteins, such as ADRB2, KCNMA1 and SQSTM1 (PubMed:22399288, PubMed:27481942, PubMed:37802024). Acts as a negative regulator of autophagy by mediating palmitoylation of SQSTM1, decreasing affinity between SQSTM1 and ATG8 proteins and recruitment of ubiquitinated cargo proteins to autophagosomes (PubMed:37802024). Acts as a lysophospholipase and hydrolyzes lysophosphatidylcholine (lyso-PC) (PubMed:19439193). Also hydrolyzes lysophosphatidylethanolamine (lyso- PE), lysophosphatidylinositol (lyso-PI) and lysophosphatidylserine (lyso-PS) (By similarity). Has much higher thioesterase activity than lysophospholipase activity (PubMed:19439193). Contributes to the production of lysophosphatidic acid (LPA) during blood coagulation by recognizing and cleaving plasma phospholipids to generate lysophospholipids which in turn act as substrates for ENPP2 to produce LPA (PubMed:21393252).

Cellular Location
Cytoplasm. Cell membrane. Nucleus membrane. Endoplasmic reticulum. Note=Shows predominantly a cytoplasmic localization with a weak expression in the cell membrane, nuclear membrane and endoplasmic reticulum.

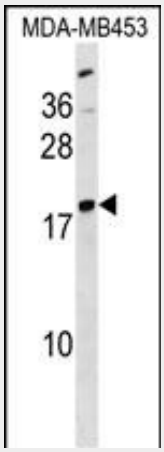
Tissue Location
Platelets..

LYPLA1 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

LYPLA1 Antibody (Center) - Images



LYPLA1 Antibody (Center) (Cat. #AP19062c) western blot analysis in MDA-MB453 cell line lysates

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(35ug/lane).This demonstrates the LYPLA1 antibody detected the LYPLA1 protein (arrow).

LYPLA1 Antibody (Center) - Background

Lysophospholipases are enzymes that act on biological membranes to regulate the multifunctional lysophospholipids. The protein encoded by this gene hydrolyzes lysophosphatidylcholine in both monomeric and micellar forms. The use of alternate polyadenylation sites has been found for this gene. There are alternatively spliced transcript variants described for this gene but the full length nature is not known yet.

LYPLA1 Antibody (Center) - References

Satou, M., et al. Endocrinology 151(10):4765-4775(2010)
Dekker, F.J., et al. Nat. Chem. Biol. 6(6):449-456(2010)
Hirano, T., et al. Biochim. Biophys. Acta 1791(8):797-805(2009)
Siegel, G., et al. Nat. Cell Biol. 11(6):705-716(2009)
Devedjiev, Y., et al. Structure 8(11):1137-1146(2000)