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Anti-LYPLA1 Antibody

Catalog # AP60085

Product Information

Application	WB, IHC, IF/IC
Primary Accession	O75608
Reactivity	Human, Mouse, Rat, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	24670

Additional Information

Gene ID	10434
Other Names	APT1; LPL1; Acyl-protein thioesterase 1; APT-1; hAPT1; Lysophospholipase 1; Lysophospholipase I; LPL-I; LysoPLA I
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human LYPLA1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IF/IC~~N/A
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	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).

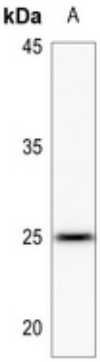
Cellular Location

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.

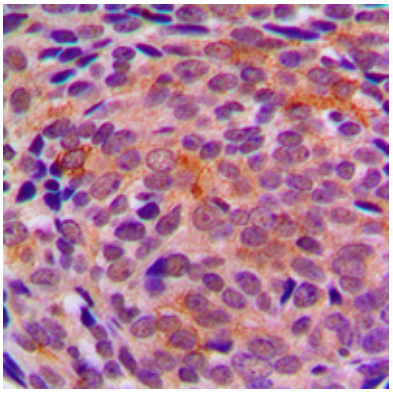
Tissue Location

Platelets..

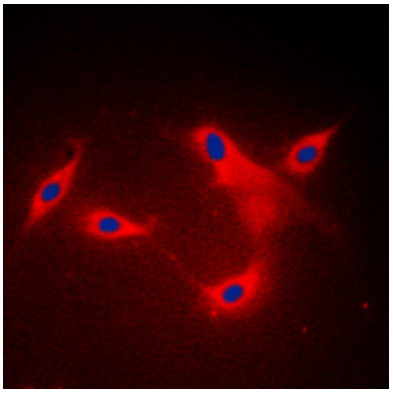
Images



Western blot analysis of LYPLA1 expression in rat lung (A) whole cell lysates. (Predicted band size: 24 kD; Observed band size: 25 kD)

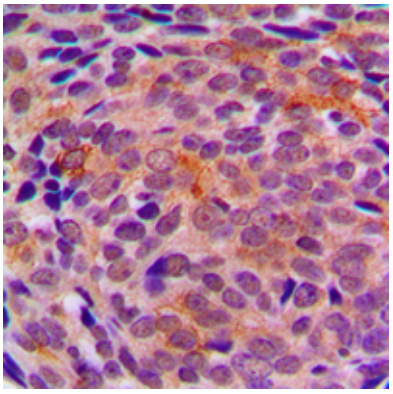


Immunohistochemical analysis of LYPLA1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of LYPLA1 staining in MDAMB453 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Immunohistochemical analysis of LYPLA1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at



room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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