abcam

**ab214034**

# Anti-LPCAT1 antibody [EPR19882]

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR19882 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.516 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### IP

#### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/30 |
| **Notes** | - |

### WB

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/2000 |
| **Notes** | - |

## ICC/IF

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/250 |
| **Notes** | - |

## Flow Cyt (Intra)

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/50 |
| **Notes** | - |

## IHC-P

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/2000 |
| **Notes** | - |

# Target data

See full target information LPCAT1

**Function** Exhibits acyltransferase activity (PubMed:18156367, PubMed:21498505). Exhibits acetyltransferase activity (By similarity). Activity is calcium-independent (By similarity). Catalyzes the conversion of lysophosphatidylcholine (1-acyl-sn-glycero-3-phosphocholine or LPC) into phosphatidylcholine (1,2-diacyl-sn-glycero-3-

phosphocholine or PC) (PubMed:18156367, PubMed:21498505). Catalyzes the conversion 1-acyl-sn-glycerol-3-phosphate (lysophosphatidic acid or LPA) into 1,2-diacyl-sn-glycerol-3-phosphate (phosphatidic acid or PA) by incorporating an acyl moiety at the sn-2 position of the glycerol backbone (By similarity). Displays a clear preference for saturated fatty acyl-CoAs, and 1-myristoyl or 1-palmitoyl LPC as acyl donors and acceptors, respectively (By similarity). Involved in platelet-activating factor (PAF) biosynthesis by catalyzing the conversion of the PAF precursor, 1-O-alkyl-sn-glycero-3-phosphocholine (lyso-PAF) into 1-O-alkyl-2-acetyl-sn-glycero-3-phosphocholine (PAF) (By similarity). May synthesize phosphatidylcholine in pulmonary surfactant, thereby playing a pivotal role in respiratory physiology (By similarity). Involved in the regulation of lipid droplet number and size (PubMed:25491198).

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

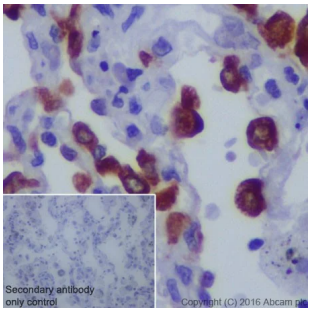
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We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

## 9 product images




### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LPCAT1 antibody [EPR19882] (ab214034)

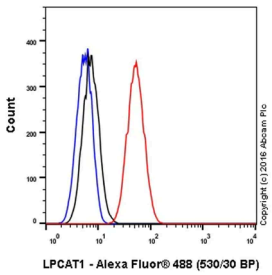
LPCAT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LPCAT1 antibody

Immunohistochemical analysis of paraffin-embedded human lung tissue labeling LPCAT1 with ab214034 at 1/2000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) at 1/500 dilution. Cytoplasmic or granular staining on the type two alveolar epithelial cells of human lung is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) at 1/500 dilution.

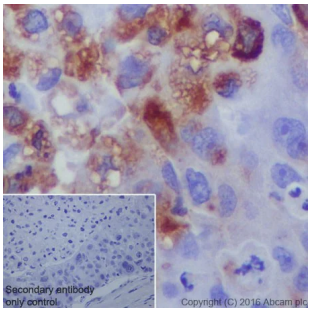
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.




## Flow Cytometry (Intracellular) - Anti-LPCAT1 antibody [EPR19882] (ab214034)

LPCAT1 Flow Cytometry (Intracellular) staining using rabbit Anti-LPCAT1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed A431 (Human epidermoid carcinoma cell line) cells labeling LPCAT1 with ab214034 at 1/50 dilution (red) compared with aRabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730; black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody; blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LPCAT1 antibody [EPR19882] (ab214034)

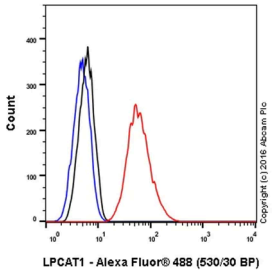
LPCAT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LPCAT1 antibody

Immunohistochemical analysis of paraffin-embedded human liver cancer tissue labeling LPCAT1 with ab214034 at 1/2000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) at 1/500 dilution. Cytoplasmic or granular staining on the liver cancer cells which contain abundant lipid drops is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) at 1/500 dilution.

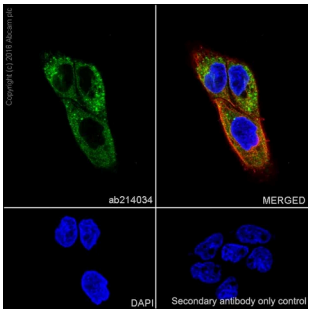
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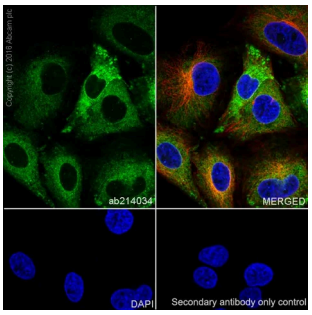

## Immunocytochemistry/ Immunofluorescence - Anti-LPCAT1 antibody [EPR19882] (ab214034)

LPCAT1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LPCAT1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized A431 (Human epidermoid carcinoma cell line) cells labeling LPCAT1 with ab214034 at 1/250 dilution followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on A431 cells. The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.

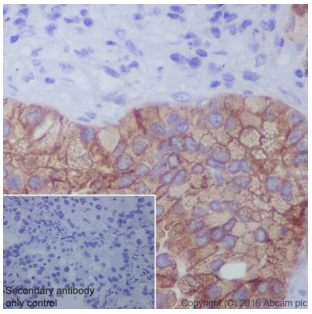



## Immunocytochemistry/ Immunofluorescence - Anti-LPCAT1 antibody [EPR19882] (ab214034)

LPCAT1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LPCAT1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized A549 (Human lung carcinoma cell line) cells labeling LPCAT1 with ab214034 at 1/250 dilution followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on A549 cells. The nuclear counterstain is DAPI (blue).
Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).

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## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LPCAT1 antibody [EPR19882] (ab214034)

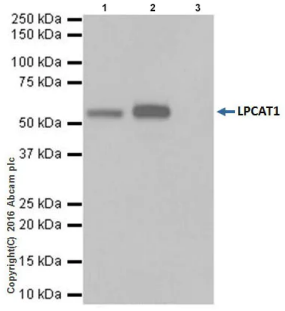
LPCAT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-LPCAT1 antibody

Immunohistochemical analysis of paraffin-embedded human lung cancer tissue labeling LPCAT1 with ab214034 at 1/2000 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) at 1/500 dilution. Cytoplasmic or granular staining on the lung cancer cells is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.




## Immunoprecipitation - Anti-LPCAT1 antibody [EPR19882] (ab214034)

LPCAT1 was immunoprecipitated from 0.35 mg of A549 (Human lung carcinoma cell line) whole cell lysate with ab214034 at 1/30 dilution.
Western blot was performed from the immunoprecipitate using ab214034 at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10,000 dilution

Lane 1: A549 whole cell lysate 10µg (Input).

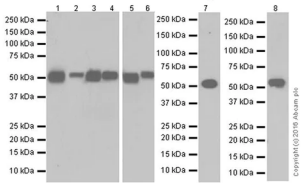
Lane 2: ab214034 IP in A549 whole cell lysate.

Lane 3: Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) instead of ab214034 in A549 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second.
All lanes:
Immunoprecipitation - Anti-LPCAT1 antibody [EPR19882] (ab214034)

Predicted band size: 59 kDa




## Western blot - Anti-LPCAT1 antibody [EPR19882] (ab214034)

LPCAT1 Western blot staining using rabbit Anti-LPCAT1 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1-4/8: 4 seconds; Lane 5/6: 8 seconds; Lane 7: 3 minutes.

Lanes 1 - 6:
Western blot - Anti-LPCAT1 antibody [EPR19882] (ab214034) at 1/2000 dilution

Lanes 7 - 8:
Western blot - Anti-LPCAT1 antibody [EPR19882] (ab214034) at 1/10000 dilution

Lane 1:
Human fetal brain lysate at 10 µg

Lane 2:
Human testis lysate at 10 µg

Lane 3:
A431 (Human epidermoid carcinoma cell line) whole cell lysate at 10 µg

Lane 4:
A549 (Human lung carcinoma cell line) whole cell lysate at 10 µg

Lane 5:
Human fetal spleen lysate at 10 µg

Lane 6:
Human fetal kidney lysate at 10 µg

Lane 7:
Human prostate cancer lysate at 10 µg

Lane 8:
PC-3 (Human prostate adenocarcinoma cell line) whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 59 kDa

Observed band size: 59 kDa

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