

Rabbit anti-Human, Rat Lipin 1/LPIN1 Polyclonal Antibody | anti-LPIN1 antibody

Anti-Lipin 1/LPIN1 Antibody Picoband

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA127120	Rabbit	Human, Rat	ELISA, Flow Cytometry, Functional Assay, Immunofluorescence, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

Lipin 1/LPIN1; Polyclonal Antibody; Anti-Lipin 1/LPIN1 Antibody Picoband; BAG family molecular chaperone regulator 1; DEAD-box helicase 4; Probable ATP-dependent RNA helicase DDX4; DEAD box protein 4; Vasa homolog; DDX4; VASA; anti-LPIN1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Expressed only in ovary and testis.Expressed in migratory primordial germ cells in the region of the gonadal ridge in both sexes.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Applicable Applications for anti-LPIN1 antibody	ELISA, FCM/FACS (Flow Cytometry), IF (Immunofluorescence), ICC (Immunocytochemistry), WB (Western Blot)
Immunogen	E coli-derived human Lipin 1/LPIN1 recombinant protein (Position: Q90-H886).
Subcellular Localization	Secreted, extracellular space, extracellular matrix
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	ATP-dependent RNA helicase required during spermatogenesis (PubMed:10920202, PubMed:21034600). Required to repress transposable elements and preventing their mobilization, which is essential for the germline integrity (By similarity). Acts via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and governs the methylation and subsequent repression of transposons (By similarity). Involved in the secondary piRNAs metabolic process, the production of piRNAs in fetal male germ cells through a ping-pong amplification cycle (By similarity). Required for PIWIL2 slicing-triggered piRNA biogenesis: helicase activity enables utilization of one of the slice cleavage fragments generated by PIWIL2 and processing these pre-piRNAs into piRNAs (By similarity).
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.



FCM/FACS (Flow Cytometry)

Figure 3. Flow Cytometry analysis of SiHa cells using anti-Lipin 1/LPIN1 antibody (AAA127120).Overlay histogram showing SiHa cells stained with AAA127120 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Lipin 1/LPIN1 Antibody (AAA127120, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



WB (Western Blot)

Figure 1. Western blot analysis of Lipin 1/LPIN1 using anti-Lipin 1/LPIN1 antibody (AAA127120).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human HepG2 whole cell lysates,Lane 2: rat testis tissue lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Lipin 1/LPIN1 antigen affinity purified polyclonal antibody (#AAA127120) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Lipin 1/LPIN1 at approximately 130 kDa. The expected band size for Lipin 1/LPIN1 is at 99 kDa.



IF (Immunofluorescence)

Figure 2. IF analysis of Lipin 1/LPIN1 using anti-Lipin 1/LPIN1 antibody (AAA127120).Lipin 1/LPIN1 was detected in an immunocytochemical section of PC-3 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-Lipin 1/LPIN1 Antibody (AAA127120) overnight at 4 degree C. DyLight550 Conjugated Goat Anti-Rabbit IgG (BA1135) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

ADDITIONAL INFORMATION

Related Product Information for anti-LPIN1 antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product Categories/Family for anti-LPIN1 antibody	Primary Antibodies; Signal Transduction; Cell Biology; Cell Cycle; Stem Cells; Cell Differentiation; Cytoskeleton/ECM; Extracellular Matrix; Structures; ECM Proteins; Mesenchymal Stem Cells
References	1. Cao, H., Hegele, R. A. Identification of single-nucleotide polymorphisms in the human LPIN1 gene. J. Hum. Genet. 47: 370-372, 2002.2. Han, G.-S., Wu, W.-I., Carman, G. M. The Saccharomyces cerevisiae lipin homolog is a Mg(2+)-dependent phosphatidate phosphatase enzyme. J. Biol. Chem. 281: 9210-9218, 2006. 3. Han, S., Bahmanyar, S., Zhang, P., Grishin, N., Oegema, K., Crooke, R., Graham, M., Reue, K., Dixon, J. E., Goodman, J. M. Nuclear envelope phosphatase 1-regulatory subunit 1 (formerly TMEM188) is the metazoan Spo7p ortholog and functions in the lipin activation pathway. J. Biol. Chem. 287: 3123-3137, 2012.

NCBI AND UNIPROT INFORMATION

NCBI GI #	387528013
NCBI GeneID	23175
NCBI Accession #	NP_001248357
NCBI GenBank Nucleotide #	NM_001261428.1
UniProt Accession #	Q14693; Q53T25; A8MU38; B4DET9; B4DGS4; B4DGZ6; B5MC18; B7Z858; D6W506; E7ESE7; F5GY24

Molecular Weight	Predicted: 107 kDa
	Observed: 125 kDa
NCBI Official Full Name	phosphatidate phosphatase LPIN1 isoform 3
NCBI Official Synonym Full Names	lipin 1
NCBI Official Symbol	LPIN1
NCBI Official Synonym Symbols	PAP1
NCBI Protein Information	phosphatidate phosphatase LPIN1; lipin-1
UniProt Protein Name	Phosphatidate phosphatase LPIN1
UniProt Gene Name	LPIN1
UniProt Synonym Gene Names	KIAA0188
UniProt Entry Name	LPIN1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/lipin-1-lpin1-antibody-flow-cytometry-immunofluorescence-immunocytochemistry-western-blot-elisa/127120>