SunLong Biotech Co.,LTD
Tel: 0086-571- 56623320 Fax:0086-571- 56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-Lipin 1 antibody

SL7533R

Product Name:	Lipin 1
Chinese Name:	磷脂酸磷酸酯酶LPIN1抗体
Alias:	KIAA0188; LPIN1; PAP1; Phosphatidate phosphatase LPIN1; LPIN1_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Rabbit,Goose,Sheep,Chimpanzee,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	99 kDa
Cellular localization:	The nucleuscytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Lipin 1:501-600/890
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Lipin 1 is a member of the Lipin family of nuclear proteins. This family contains three members: Lipin 1, Lipin 2 and Lipin 3, all of which contain a nuclear signal sequence, a highly conserved amino-terminal (NLIP) domain and a carboxy-terminal (CLIP) domain. LPIN1 (Lipin 1) is crucial for normal adipose tissue development and metabolism. LPIN1 selectively activates a subset of PGC1 alpha target pathways, including fatty acid oxidation and mitochondrial oxidative phosphorylation by inducing expression of the nuclear receptor PPARalpha. LPIN1 also inactivates the lipogenic

program and suppresses circulating lipid levels. An abundance of LPIN1 promotes fat accumulation and insulin sensitivity, whereas a deficiency in LPIN1 may deter normal adipose tissue development, resulting in insulin resistance and lipodystrophy, a heterogeneous group of disorders characterized by loss of body fat, fatty liver, hypertriglyceridemia and insulin resistance.

Function:
Plays important roles in controlling the metabolism of fatty acids at differents levels. Acts as a magnesium-dependent phosphatidate phosphatase enzyme which catalyzes the conversion of phosphatidic acid to diacylglycerol during triglyceride, phosphatidylcholine and phosphatidylethanolamine biosynthesis in the reticulum endoplasmic membrane. Acts also as a nuclear transcriptional coactivator for PPARGC1A/PPARA to modulate lipid metabolism gene expression (By similarity). Is involved in adipocyte differentiation. May also be involved in mitochondrial fission by converting phosphatidic acid to diacylglycerol (By similarity).

Subunit:
Interacts (via LXXIL motif) with PPARA (By similarity). Interacts with PPARGC1A (By similarity). Interaction with PPARA and PPARGC1A leads to the formation of a complex that modulates gene transcription (By similarity). Interacts with MEF2C (By similarity).

Subcellular Location:
Nucleus membrane (By similarity). Cytoplasm, cytosol (By similarity). Endoplasmic reticulum membrane (By similarity).

Tissue Specificity:
Specifically expressed in skeletal muscle. Also abundant in adipose tissue. Lower levels in some portions of the digestive tract.

Post-translational modifications:
Phosphorylated at multiple sites in response to insulin. Phosphorylation is controlled by the mTOR signaling pathway. Phosphorylation is decreased by epinephrine. Phosphorylation may not directly affect the catalytic activity but may regulate the localization. Dephosphorylated by the CTDNEP1-CNEP1R1 complex (By similarity). Sumoylated (By similarity).

DISEASE:
Defects in LPIN1 are a cause of autosomal recessive acute recurrent myoglobinuria (ARARM) [MIM:268200]; also known as acute recurrent rhabdomyolysis. Recurrent myoglobinuria is characterized by recurrent attacks of rhabdomyolysis (necrosis or disintegration of skeletal muscle) associated with muscle pain and weakness and followed by excretion of myoglobin in the urine. Renal failure may occasionally occur. Onset is usually in early childhood under the age of 5 years.

Similarity:

	Belongs to the lipin family. **SWISS:** Q14693 **Gene ID:** 23175 **Database links:** Entrez Gene: 23175Human Entrez Gene: 14245Mouse Entrez Gene: 313977Rat Omim: 605518Human SwissProt: Q14693Human SwissProt: Q91ZP3Mouse Unigene: 467740Human Unigene: 153625Mouse **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.