

## LPAAT- $\zeta$ (P-17): sc-68595

### BACKGROUND

LPAAT- $\zeta$  (lysophosphatidic acid acyltransferase zeta), also known as AGPAT6 (1-acylglycerol-3-phosphate O-acyltransferase 6) or GPAT4 (glycerol-3-phosphate acyltransferase 4), is a 456 amino acid multi-pass membrane protein that belongs to the 1-acyl-sn-glycerol-3-phosphate acyltransferase family. Because it esterifies acyl-group from acyl-ACP to the sn-1 position of glycerol-3-phosphate, LPAAT- $\zeta$  plays an essential role in glycerolipid biosynthesis. LPAAT- $\zeta$  is active against both saturated and unsaturated long-chain fatty acyl-CoAs, and is inhibited by N-ethylmaleimide (NEM). While ubiquitously expressed, LPAAT- $\zeta$  is expressed at highest levels in skeletal muscle, heart and testis, with lowest levels of expression in lung. LPAAT- $\zeta$  contains an HXXXX motif, which is essential for acyltransferase activity and may constitute the binding site for the phosphate moiety of the glycerol-3-phosphate. The gene that encodes LPAAT- $\zeta$  consists of approximately 47,815 bases and maps to human chromosome 8p11.21.

### REFERENCES

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### CHROMOSOMAL LOCATION

Genetic locus: AGPAT6 (human) mapping to 8p11.21; Agpat6 (mouse) mapping to 8 A2.

### SOURCE

LPAAT- $\zeta$  (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LPAAT- $\zeta$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68595 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

LPAAT- $\zeta$  (P-17) is recommended for detection of LPAAT- $\zeta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LPAAT- $\zeta$  (P-17) is also recommended for detection of LPAAT- $\zeta$  in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for LPAAT- $\zeta$  siRNA (h): sc-75689, LPAAT- $\zeta$  siRNA (m): sc-75691, LPAAT- $\zeta$  shRNA Plasmid (h): sc-75689-SH, LPAAT- $\zeta$  shRNA Plasmid (m): sc-75691-SH, LPAAT- $\zeta$  shRNA (h) Lentiviral Particles: sc-75689-V and LPAAT- $\zeta$  shRNA (m) Lentiviral Particles: sc-75691-V.

Molecular Weight of LPAAT- $\zeta$ : 52 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.