SANTA CRUZ BIOTECHNOLOGY, INC.

LPAAT-α (P-14): sc-68592

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Phosphatidic acid and lysophosphatidic acid are phospholipids involved in lipid biosynthesis and signal transduction. LPAAT-α (lysophosphatidic acid acyltransferase α), also designated 1-acylglycerol-3-phosphate O-acyltransferase 1 (AGPAT1), catalyzes the synthesis of phosphatidic acid from lysophosphatidic acid by incorporating an acyl moiety at the sn-2 position of the glycerol backbone. LPAAT-α is a membrane-bound protein belonging to the LPAAT family. Members of the LPAAT family have a well-known role in lipid biosynthesis and may also play a role in tumor progression. LPAAT-α is widely expressed with highest expression in skeletal muscle.

REFERENCES

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3. Bursten, S.L. 1998. Interaction of lipopolysaccharide with a mammalian lyso-phosphatidate acyltransferase (LPAAT) transfected into *E. coli*, and effect of lisofylline on LPAAT transfected into mammalian cells. Prog. Clin. Biol. Res. 397: 345-356.
4. Leung, D.W. 2001. The structure and functions of human lysophosphatidic acid acyltransferases. Front. Biosci. 6: D944-D953.
5. Yamashita, A., Nakanishi, H., Suzuki, H., Kamata, R., Tanaka, K., Waku, K. and Sugiura, T. 2007. Topology of acyltransferase motifs and substrate specificity and accessibility in 1-acyl-sn-glycero-3-phosphate acyltransferase 1. Biochim. Biophys. Acta 1771: 1202-1215.
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CHROMOSOMAL LOCATION

Genetic locus: AGPAT1 (human) mapping to 6p21.32; Agpat1 (mouse) mapping to 17 B1.

SOURCE

LPAAT-α (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LPAAT-α of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68592 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LPAAT-α (P-14) is recommended for detection of LPAAT-α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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-α (P-14) is also recommended for detection of LPAAT-α in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LPAAT-α siRNA (h): sc-75692, LPAAT-α siRNA (m): sc-75693, LPAAT-α shRNA Plasmid (h): sc-75692-SH, LPAAT-α shRNA Plasmid (m): sc-75693-SH, LPAAT-α shRNA (h) Lentiviral Particles: sc-75692-V and LPAAT-α shRNA (m) Lentiviral Particles: sc-75693-V.

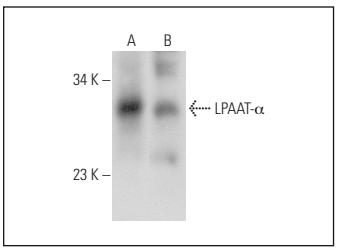
Molecular Weight of LPAAT-α: 32 kDa.

Positive Controls: mouse heart extract: sc-2254 or rat skeletal muscle extract: sc-364810.

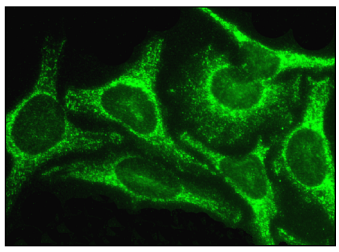
RECOMMENDED SECONDARY REAGENTS

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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™ Mounting Medium: sc-24941.

DATA



LPAAT-α (P-14): sc-68592. Western blot analysis of LPAAT-α expression in mouse heart (**A**) and rat skeletal muscle (**B**) tissue extracts.



LPAAT-α (P-14): sc-68592. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.