SANTA CRUZ BIOTECHNOLOGY, INC.

LPAAT-ε (P-16): sc-86712

BACKGROUND

Phosphatidic acid and lysophosphatidic acid are phospholipids involved in lipid biosynthesis and signal transduction. LPAAT-ε (lysophosphatidic acid acyltransferase ε, also designated 1-AGP acyltransferase 5 (AGPAT5)) catalyzes the synthesis of phosphatidic acid from lysophosphatidic acid. LPAAT-ε is a membrane-bound protein belonging to the LPAAT family. Members of the LPAAT family have a well-known role in lipid biosynthesis and they may also play a role in tumor progression. LPAAT-ε is expressed in a tissue-specific manner in prostate and testis. LPAAT-ε is most closely related to AGPAT8, which is highly expressed in heart.

REFERENCES

1. West, J., et al. 1997. Cloning and expression of two human lysophosphatidic acid acyltransferase cDNAs that enhance cytokine-induced signaling responses in cells. DNA Cell Biol. 16: 691-701.
2. Eberhardt, C., et al. 1997. Human lysophosphatidic acid acyltransferase. cDNA cloning, expression, and localization to chromosome 9q34.3. J. Biol. Chem. 272: 20299-20305.
3. Aguado, B., et al. 1998. Characterization of a human lysophosphatidic acid acyltransferase that is encoded by a gene located in the class III region of the human major histocompatibility complex. J. Biol. Chem. 273: 4096-4105.
4. 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.
5. Eberhardt, C., et al. 1999. cDNA cloning, expression and chromosomal localization of two human lysophosphatidic acid acyltransferases. Adv. Exp. Med. Biol. 469: 351-356.
6. Lu, B., et al. 2005. Cloning and characterization of murine 1-acyl-sn-glycerol 3-phosphate acyltransferases and their regulation by PPARα in murine heart. Biochem. J. 385: 469-477.
7. Agarwal, A.K., et al. 2006. Functional characterization of human 1-acylglycerol-3-phosphate acyltransferase isoform 8: cloning, tissue distribution, gene structure, and enzymatic activity. Arch. Biochem. Biophys. 449: 64-76.

CHROMOSOMAL LOCATION

Genetic locus: AGPAT5 (human) mapping to 8p23.1; Agpat5 (mouse) mapping to 8 A1.3.

SOURCE

LPAAT-ε (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LPAAT-ε 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-86712 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LPAAT-ε (P-16) is recommended for detection of LPAAT-ε 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-ε (P-16) is also recommended for detection of LPAAT-ε in additional species, including equine, canine and avian.

Suitable for use as control antibody for LPAAT-ε siRNA (h): sc-77618, LPAAT-ε siRNA (m): sc-149018, LPAAT-ε shRNA Plasmid (h): sc-77618-SH, LPAAT-ε shRNA Plasmid (m): sc-149018-SH, LPAAT-ε shRNA (h) Lentiviral Particles: sc-77618-V and LPAAT-ε shRNA (m) Lentiviral Particles: sc-149018-V.

Molecular Weight of LPAAT-ε: 42 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™ 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) 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.

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 or our catalog for detailed protocols and support products.