

LPAAT- η (D-16): sc-243311

BACKGROUND

Phosphatidic acid and lysophosphatidic acid are phospholipids involved in lipid biosynthesis and signal transduction. LPAAT- η , also known as lysophospholipid acyltransferase LPCAT4, AGPAT7 (1-acylglycerol-3-phosphate O-acyltransferase 7), AYTL3 (acyltransferase-like 3) or LPEAT2 (lysophosphatidylethanolamine acyltransferase 2), is a 524 amino acid protein belonging to the 1-acyl-sn-glycerol-3-phosphate acyltransferase family. LPAAT- η displays acyl-CoA-dependent lysophospholipid acyltransferase activity, with lysophospholipids as its substrates. For example, LPAAT- η converts lysophosphatidylethanolamine to phosphatidylethanolamine and lysophosphatidylcholine to phosphatidylcholine, respectively. In contrast, LPAAT- η has no lysophosphatidylinositol, glycerol-3-phosphate, diacylglycerol or lysophosphatidic acid acyltransferase activity. LPAAT- η also prefers long chain acyl-CoAs (C16, C18) as acyl donors. Localized to the endoplasmic reticulum membrane, LPAAT- η is widely expressed with predominant levels in brain. Two isoforms of LPAAT- η are produced by alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: LPCAT4 (human) mapping to 15q14; Lpcat4 (mouse) mapping to 2 E3.

SOURCE

LPAAT- η (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LPAAT- η of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-243311 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LPAAT- η (D-16) is recommended for detection of LPAAT- η 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); non cross-reactive with other LPAAT family members.

LPAAT- η (D-16) is also recommended for detection of LPAAT- η in additional species, including equine and porcine.

Suitable for use as control antibody for LPAAT- η siRNA (h): sc-90140, LPAAT- η siRNA (m): sc-149019, LPAAT- η shRNA Plasmid (h): sc-90140-SH, LPAAT- η shRNA Plasmid (m): sc-149019-SH, LPAAT- η shRNA (h) Lentiviral Particles: sc-90140-V and LPAAT- η shRNA (m) Lentiviral Particles: sc-149019-V.

Molecular Weight of LPAAT- η isoforms 1/2: 57/49 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.