

LYPLA3 (T-14): sc-164943

BACKGROUND

LYPLA3 (lysophospholipase 3) also referred to as ACS, LLPL or LPLA2 (lysosomal phospholipase A₂), is ubiquitously expressed with highest expression in kidney, placenta, pancreas, testis, spleen, heart and skeletal muscle. LYPLA3, which localizes to lysosomes, is calcium-independent and has an acidic pH optimum. LYPLA3 transacylates ceramide and increases lysosomal membrane permeability to both potassium ions and protons. It may play a critical role in pulmonary surfactant phospholipid degradation due to its high specificity towards phosphatidylethanolamine and phosphatidylcholine in alveolar macrophages. LYPLA3 may also enhance lysosome osmotic sensitivity, resulting in the destabilization of the enzyme by causing leakage and inducing apoptosis. LYPLA3 is thought to remodel acyl groups and modulate the biological and pharmacological activities of some lipophilic alcohols.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PLA2G15 (human) mapping to 16q22.1; Pla2g15 (mouse) mapping to 8 D3.

SOURCE

LYPLA3 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LYPLA3 of human origin.

STORAGE

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

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-164943 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LYPLA3 (T-14) is recommended for detection of LYPLA3 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); non cross-reactive with other LYPLA family members.

LYPLA3 (T-14) is also recommended for detection of LYPLA3 in additional species, including equine and canine.

Suitable for use as control antibody for LYPLA3 siRNA (h): sc-93270, LYPLA3 siRNA (m): sc-149182, LYPLA3 shRNA Plasmid (h): sc-93270-SH, LYPLA3 shRNA Plasmid (m): sc-149182-SH, LYPLA3 shRNA (h) Lentiviral Particles: sc-93270-V and LYPLA3 shRNA (m) Lentiviral Particles: sc-149182-V.

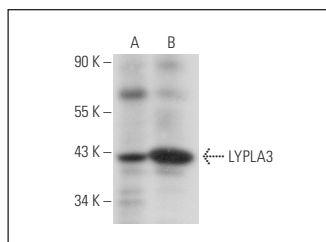
Molecular Weight of LYPLA3: 42 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse skeletal muscle extract: sc-364250 or mouse heart extract: sc-2254.

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



LYPLA3 (T-14): sc-164943. Western blot analysis of LYPLA3 expression in mouse heart (A) and mouse skeletal muscle (B) tissue extracts.

RESEARCH USE

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