

LYPLA2 (B-12): sc-390546

BACKGROUND

The multifunctional lysophospholipids (detergent-like intermediates) found in various biological membranes are regulated by the enzymatic activity of lysophospholipases. Increased levels of lysophospholipids are associated with a host of diseases, including hyperlipidemia and atherosclerosis. LYPLA1 (lysophospholipase 1), also known as APT1 or LPL1, and LYPLA2 (lysophospholipase 2) are lysophospholipases that localize to the cytoplasm and belong to the AB hydrolase 2 family. Both LYPLA1 and LYPLA2 function to enzymatically hydrolyze fatty acids from S-acetylated cysteine residues on a variety of monomeric and micellar substrates, such as H-Ras. Due to their ability to catalytically regulate the overall concentration of lysophospholipids in cellular membranes, LYPLA1 and LYPLA2 may play a crucial role in the development of lysophospholipid-associated disorders. LYPLA1 and LYPLA2 exist as multiple alternatively spliced isoforms that are expressed in tissues throughout the body.

REFERENCES

1. Bohn, E., et al. 1992. Annexin II inhibits calcium-dependent phospholipase A1 and lysophospholipase but not triacyl glycerol lipase activities of rat liver hepatic lipase. *FEBS Lett.* 296: 237-240.
2. Wang, A., et al. 1999. A specific human lysophospholipase: cDNA cloning, tissue distribution and kinetic characterization. *Biochim. Biophys. Acta* 1437: 157-169.

CHROMOSOMAL LOCATION

Genetic locus: LYPLA2 (human) mapping to 1p36.11; *Lypla2* (mouse) mapping to 4 D3.

SOURCE

LYPLA2 (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 169-187 of LYPLA2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LYPLA2 (B-12) is available conjugated to agarose (sc-390546 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390546 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390546 PE), fluorescein (sc-390546 FITC), Alexa Fluor® 488 (sc-390546 AF488), Alexa Fluor® 546 (sc-390546 AF546), Alexa Fluor® 594 (sc-390546 AF594) or Alexa Fluor® 647 (sc-390546 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390546 AF680) or Alexa Fluor® 790 (sc-390546 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390546 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

LYPLA2 (B-12) is recommended for detection of LYPLA2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

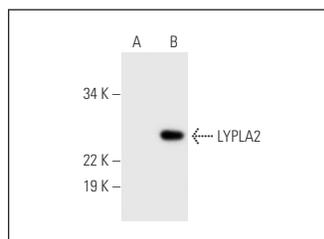
LYPLA2 (B-12) is also recommended for detection of LYPLA2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LYPLA2 siRNA (h): sc-78672, LYPLA2 siRNA (m): sc-149181, LYPLA2 shRNA Plasmid (h): sc-78672-SH, LYPLA2 shRNA Plasmid (m): sc-149181-SH, LYPLA2 shRNA (h) Lentiviral Particles: sc-78672-V and LYPLA2 shRNA (m) Lentiviral Particles: sc-149181-V.

Molecular Weight of LYPLA2: 25 kDa.

Positive Controls: LYPLA2 (h3): 293T Lysate: sc-112779.

DATA



LYPLA2 (B-12): sc-390546. Western blot analysis of LYPLA2 expression in non-transfected: sc-117752 (A) and human LYPLA2 transfected: sc-112779 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Xue, Q., et al. 2023. Therapeutic hypothermia inhibits hypoxia-induced cardiomyocyte apoptosis via the MiR-483-3p/Cdk9 axis. *J. Am. Heart Assoc.* 12: e026160.
2. Heathcote, K.C., et al. 2024. N-terminal cysteine acetylation and oxidation patterns may define protein stability. *Nat. Commun.* 15: 5360.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.