

# LYPLA2 (B-11): sc-515061

## 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 A<sub>1</sub> 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.
3. Wang, A. and Dennis, E.A. 1999. Mammalian lysophospholipases. *Biochim. Biophys. Acta* 1439: 1-16.
4. Wang, A., et al. 2000. Subcellular localization and PKC-dependent regulation of the human lysophospholipase A/acyl-protein thioesterase in WISH cells. *Biochim. Biophys. Acta* 1484: 207-214.

## CHROMOSOMAL LOCATION

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

## SOURCE

LYPLA2 (B-11) is a mouse monoclonal antibody raised against amino acids 171-210 mapping within an internal region of LYPLA2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LYPLA2 (B-11) is available conjugated to agarose (sc-515061 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515061 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515061 PE), fluorescein (sc-515061 FITC), Alexa Fluor® 488 (sc-515061 AF488), Alexa Fluor® 546 (sc-515061 AF546), Alexa Fluor® 594 (sc-515061 AF594) or Alexa Fluor® 647 (sc-515061 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515061 AF680) or Alexa Fluor® 790 (sc-515061 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

LYPLA2 (B-11) 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).

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.

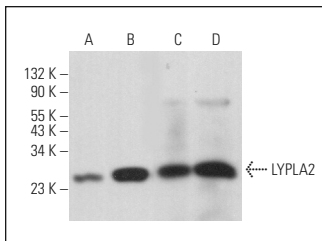
Molecular Weight of LYPLA2: 25 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, LYPLA2 (h3): 293T Lysate: sc-112779 or Raji whole cell lysate: sc-364236.

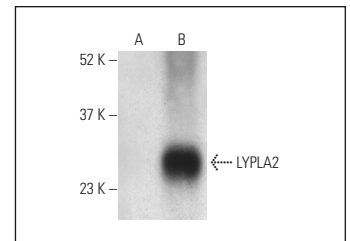
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



LYPLA2 (B-11): sc-515061. Western blot analysis of LYPLA2 expression in Raji (A) and Neuro-2A (B) whole cell lysates and rat liver (C) and rat stomach (D) tissue extracts.



LYPLA2 (B-11) HRP: sc-515061 HRP. Direct western blot analysis of LYPLA2 expression in non-transfected: sc-112779 (A) and human LYPLA2 transfected: sc-112779 (B) 293T whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.