

# LAMP-1 (H5G11): sc-18821

## BACKGROUND

Lysosome-associated membrane proteins (LAMP) are glycosylated type I membrane proteins that play a role in the biogenesis of the pigment melanin. LAMP-1 (also designated CD107a) and LAMP-2 (also designated CD107b) are involved in a variety of functions, including cellular adhesion, and are thought to participate in the process of tumor invasion and metastasis. Newly synthesized LAMP-1 and LAMP-2 proteins are sorted at the *trans*-Golgi network and are transported intracellularly via a pathway that is distinct from the Clathrin-coated vesicles used for the mannose-6 phosphate receptor. LAMP-1 is expressed on the surface of Thrombin-activated but not resting platelets, and it is thought to be involved in the adhesive, prothrombic properties of these cells. Both LAMP-1 and LAMP-2 are involved in maintaining lysosome acidity and protecting the lysosomal membranes from autodigestion, and their expression is increased in patients with lysosomal storage disorders.

## CHROMOSOMAL LOCATION

Genetic locus: LAMP1 (human) mapping to 13q34.

## SOURCE

LAMP-1 (H5G11) is a mouse monoclonal antibody raised against adherent spleen cells 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.

LAMP-1 (H5G11) is available conjugated to agarose (sc-18821 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-18821 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-18821 PE), fluorescein sc-18821 FITC), Alexa Fluor<sup>®</sup> 488 (sc-18821 AF488), Alexa Fluor<sup>®</sup> 546 (sc-18821 AF546), Alexa Fluor<sup>®</sup> 594 (sc-18821 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-18821 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-18821 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-18821 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

LAMP-1 (H5G11) is recommended for detection of LAMP-1 of 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for LAMP-1 siRNA (h): sc-29389, LAMP-1 shRNA Plasmid (h): sc-29389-SH and LAMP-1 shRNA (h) Lentiviral Particles: sc-29389-V.

Molecular Weight of LAMP-1: 120 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or Ramos cell lysate: sc-2216.

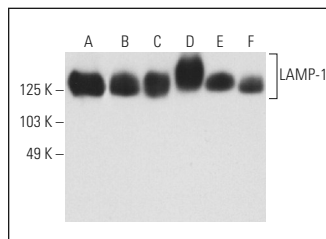
## RESEARCH USE

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

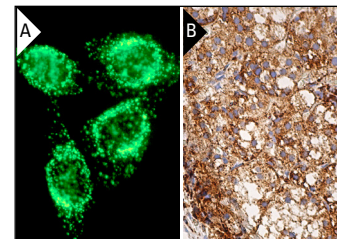
## STORAGE

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

## DATA



LAMP-1 (H5G11): sc-18821. Western blot analysis of LAMP-1 expression in HeLa (A), JAR (B), ECV304 (C), U-937 (D), Jurkat (E) and Ramos (F) whole cell lysates.



LAMP-1 (H5G11): sc-18821. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Taha, T., et al. 2005. Tumor necrosis factor induces the loss of sphingosine kinase-1 by a cathepsin B-dependent mechanism. *J. Biol. Chem.* 280: 17196-17202.
- Tan, J.M., et al. 2008. Lysine 63-linked ubiquitination promotes the formation and autophagic clearance of protein inclusions associated with neurodegenerative diseases. *Hum. Mol. Genet.* 17: 431-439.
- Sato, H., et al. 2009. Altered expression of glycoproteins on the cell surface of Jurkat cells during etoposide-induced apoptosis: shedding and intracellular translocation of glycoproteins. *Biochim. Biophys. Acta* 1790: 1198-1205.
- Engel, S., et al. 2011. Role of endosomes in simian virus 40 entry and infection. *J. Virol.* 85: 4198-4211.
- Hornig, N., et al. 2012. Combination of a bispecific antibody and costimulatory antibody-ligand fusion proteins for targeted cancer immunotherapy. *J. Immunother.* 35: 418-429.
- Lee, E.J., et al. 2014. Down-regulation of lipid raft-associated onco-proteins via cholesterol-dependent lipid raft internalization in docosahexaenoic acid-induced apoptosis. *Biochim. Biophys. Acta* 1841: 190-203.
- Skogberg, G., et al. 2015. Human thymic epithelial primary cells produce exosomes carrying tissue-restricted antigens. *Immunol. Cell Biol.* 93: 727-734.
- Janer, A., et al. 2016. SLC25A46 is required for mitochondrial lipid homeostasis and cristae maintenance and is responsible for Leigh syndrome. *EMBO Mol. Med.* 8: 1019-1038.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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