



# LAMP-2 (GL2A7): sc-47749

## 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.

## REFERENCES

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5. Dharmawardhane, S., Sanders, L.C., Martin, S.S., Daniels, R.H. and Bokoch, G.M. 1997. Localization of p21-activated kinase 1 (PAK1) to pinocytic vesicles and cortical Actin structures in stimulated cells. *J. Cell Biol.* 138: 1265-1278.
6. Karlsson, K. and Carlsson, S.R. 1998. Sorting of lysosomal membrane glycoproteins LAMP-1 and LAMP-2 into vesicles distinct from mannose 6-phosphate receptor/ $\gamma$ -adaptin vesicles at the *trans*-Golgi network. *J. Biol. Chem.* 273: 18966-18973.
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8. Hua, C.T., Hopwood, J.J., Carlsson, S.R., Harris, R.J. and Meikle, P.J. 1998. Evaluation of the lysosome-associated membrane protein LAMP-2 as a marker for lysosomal storage disorders. *Clin. Chem.* 44: 2094-2102.

## CHROMOSOMAL LOCATION

Genetic locus: Lamp2 (mouse) mapping to X A3.3.

## SOURCE

LAMP-2 (GL2A7) is a rat monoclonal antibody raised against purified liver lysosomal membranes of mouse origin.

## PRODUCT

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

## APPLICATIONS

LAMP-2 (GL2A7) is recommended for detection of LAMP-2 of mouse origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for LAMP-2 siRNA (m): sc-35791, LAMP-2 shRNA Plasmid (m): sc-35791-SH and LAMP-2 shRNA (m) Lenti-viral Particles: sc-35791-V.

Molecular Weight of LAMP-2: 120 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, NIH/3T3 whole cell lysate: sc-2210 or RAW 264.7 whole cell lysate: sc-2211.

## SELECT PRODUCT CITATIONS

1. Pott, J., Basler, T., Duerr, C.U., Rohde, M., Goethe, R. and Hornef, M.W. 2009. Internalization-dependent recognition of *Mycobacterium avium* ssp. *paratuberculosis* by intestinal epithelial cells. *Cell. Microbiol.* 11: 1802-1815.

## 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.