

# LAMP-2 (5K54): sc-71490

## 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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3. Kannan, K., Stewart, R.M., Bounds, W., Carlsson, S.R., Fukuda, M., Betzing, K.W. and Holcombe, R.F. 1996. Lysosome-associated membrane proteins h-LAMP1 (CD107a) and h-LAMP2 (CD107b) are activation-dependent cell surface glycoproteins in human peripheral blood mononuclear cells which mediate cell adhesion to vascular endothelium. *Cell. Immunol.* 171: 10-19.
4. 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.
5. Sarafian, V., Jadot, M., Foidart, J.M., Letesson, J.J., Van den Brule, F., Castronovo, V., Wattiaux, R. and Coninck, S.W. 1998. Expression of LAMP-1 and LAMP-2 and their interactions with galectin-3 in human tumor cells. *Int. J. Cancer* 75: 105-111.
6. 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 (5K54) is a rat monoclonal antibody raised against glycoprotein fractions purified from BALB/c mouse embryo 3T3 cell line.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

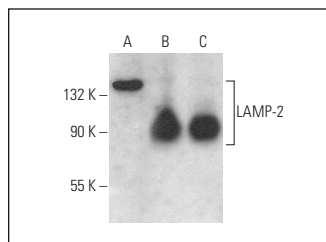
LAMP-2 (5K54) is recommended for detection of LAMP-2 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per  $1 \times 10^6$  cells).

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) Lentiviral Particles: sc-35791-V.

Molecular Weight of LAMP-2: 120 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, NIH/3T3 whole cell lysate: sc-2210 or C2C12 whole cell lysate: sc-364188.

## DATA



LAMP-2 (5K54): sc-71490. Western blot analysis of LAMP-2 expression in NIH/3T3 (A), c4 (B) and C2C12 (C) 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.

## PROTOCOLS

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