SANTA CRUZ BIOTECHNOLOGY, INC.

LAMP-2 (M3/84): sc-19991

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.

CHROMSOMAL LOCATION

Genetic locus: LAMP2 (human) mapping to Xq24; Lamp2 (mouse) mapping to X A3.3.

SOURCE

LAMP-2 (M3/84) is a rat monoclonal antibody epitope mapping to immunoadsorbent purified mouse macrophage glycoprotien fraction.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LAMP-2 (M3/84) is available conjugated to agarose (sc-19991 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-19991 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19991 PE), fluorescein (sc-19991 FITC), Alexa Fluor® 488 (sc-19991 AF488), Alexa Fluor® 546 (sc-19991 AF546), Alexa Fluor® 594 (sc-19991 AF594) or Alexa Fluor® 647 (sc-19991 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19991 AF680) or Alexa Fluor® 790 (sc-19991 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

LAMP-2 (M3/84) is recommended for detection of LAMP-2 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

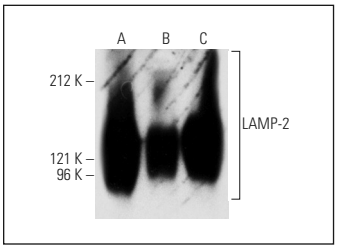
Suitable for use as control antibody for LAMP-2 siRNA (h): sc-29390, LAMP-2 siRNA (m): sc-35791, LAMP-2 shRNA Plasmid (h): sc-29390-SH, LAMP-2 shRNA Plasmid (m): sc-35791-SH, LAMP-2 shRNA (h) Lentiviral Particles: sc-29390-V and LAMP-2 shRNA (m) Lentiviral Particles: sc-35791-V.

Molecular Weight of LAMP-2: 120 kDa.

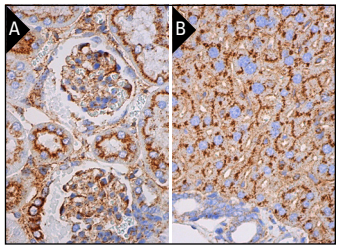
STORAGE

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

DATA



LAMP-2 (M3/84): sc-19991. Western blot analysis of LAMP-2 expression in MCP-5 (**A**), NIH/3T3 (**B**) and RAW 264.7 (**C**) whole cell lysates.



LAMP-2 (M3/84): sc-19991. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing cytoplasmic staining of cells in glomeruli and apical membrane staining of cells in tubules (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing membrane and cytoplasmic staining of hepatocytes and cytoplasmic staining of bile duct cells (**B**).

SELECT PRODUCT CITATIONS

1. Diez-Juan, A., et al. 2004. Selective inactivation of $p27^{Kip1}$ in hematopoietic progenitor cells increases neointimal macrophage proliferation and accelerates atherosclerosis. Blood 103: 158-161.
2. Peng, N., et al. 2014. An activator of mTOR inhibits oxLDL-induced autophagy and apoptosis in vascular endothelial cells and restricts atherosclerosis in apolipoprotein $E^{-/-}$ mice. Sci. Rep. 4: 5519.
3. Kessinger, C.W., et al. 2015. Statins improve the resolution of established murine venous thrombosis: reductions in thrombus burden and vein wall scarring. PLoS ONE 10: e0116621.
4. Ampem, G., et al. 2016. Adipose tissue macrophages in non-rodent mammals: a comparative study. Cell Tissue Res. 363: 461-478.
5. Furukawa, S., et al. 2017. Databases for technical aspects of immunohistochemistry. J. Toxicol. Pathol. 30: 79-107.
6. Raghavan, S., et al. 2018. Protease-activated receptor 1 inhibits cholesterol efflux and promotes atherogenesis via cullin 3-mediated degradation of the ABCA1 transporter. J. Biol. Chem. 293: 10574-10589.
7. Ryzhikov, M., et al. 2019. Diurnal rhythms spatially and temporally organize autophagy. Cell Rep. 26: 1880-1892.e6.
8. Zou, H., et al. 2020. Cadmium-induced cytotoxicity in mouse liver cells is associated with the disruption of autophagic flux via inhibiting the fusion of autophagosomes and lysosomes. Toxicol. Lett. 321: 32-43.

RESEARCH USE

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

PROTOCOLS

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