SANTA CRUZ BIOTECHNOLOGY, INC.

LAMP-2 (6A430): sc-71492

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (6A430) 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 (6A430) is available conjugated to either phycoerythrin (sc-71492 PE), fluorescein (sc-71492 FITC) or Alexa Fluor® 488 (sc-71492 AF488) or Alexa Fluor® 647 (sc-71492 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

LAMP-2 (6A430) 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.

Positive Controls: J774.A1 cell lysate: sc-3802, WEHI-231 whole cell lysate: sc-2213 or RAW 264.7 whole cell lysate: sc-2211.

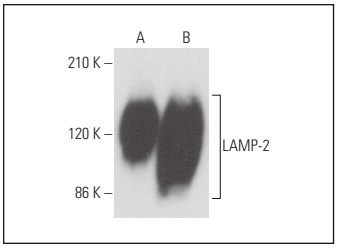
STORAGE

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

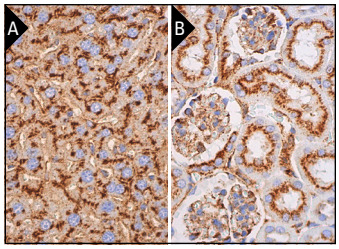
RESEARCH USE

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

DATA



LAMP-2 (6A430): sc-71492. Western blot analysis of LAMP-2 expression in J774.A1 (**A**) and WEHI-231 (**B**) whole cell lysates.



LAMP-2 (6A430): sc-71492. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing membrane and cytoplasmic staining of hepatocytes (**A**). 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 (**B**).

SELECTPRODUCT CITATIONS

1. Haspel, J., et al. 2011. Characterization of macroautophagic flux *in vivo* using a leupeptin-based assay. Autophagy 7: 629-642.
2. Reibring, C.G., et al. 2014. Expression patterns and subcellular localization of carbonic anhydrases are developmentally regulated during tooth formation. PLoS ONE 9: e96007.
3. Chen, S., et al. 2019. 27-hydroxycholesterol contributes to lysosomal membrane permeabilization-mediated pyroptosis in co-cultured SH-SY5Y cells and C6 cells. Front. Mol. Neurosci. 12: 14.
4. Li, Y., et al. 2019. CD47 deficiency protects cardiomyocytes against hypoxia/reoxygenation injury by rescuing autophagic clearance. Mol. Med. Rep. 19: 5453-5463.
5. Li, Y., et al. 2020. CD47 antibody suppresses isoproterenol-induced cardiac hypertrophy through activation of autophagy. Am. J. Transl. Res. 12: 5908-5923.
6. Najafov, A., et al. 2021. RIPK1 promotes energy sensing by the mTORC1 pathway. Mol. Cell 81: 370-385.e7.
7. Seike, T., et al. 2022. Hydroxynonenal causes hepatocyte death by disrupting lysosomal integrity in non-alcoholic steatohepatitis. Cell. Mol. Gastroenterol. Hepatol. 14: 925-944.
8. Bautista-Pérez, R., et al. 2024. Oral exposure to titanium dioxide E171 and zinc oxide nanoparticles induces multi-organ damage in rats: role of ceramide. Int. J. Mol. Sci. 25: 5881.

PROTOCOLS

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