SANTA CRUZ BIOTECHNOLOGY, INC.

LAMP-2 (ABL-93): sc-20004

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.

CHROMOSOMAL LOCATION

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

SOURCE

LAMP-2 (ABL-93) is a rat monoclonal antibody raised against glycoprotein fractions purified from BALB/c mouse embryo 3T3 cell line.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LAMP-2 (ABL-93) is available conjugated to agarose (sc-20004 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-20004 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20004 PE), fluorescein (sc-20004 FITC), Alexa Fluor® 488 (sc-20004 AF488), Alexa Fluor® 546 (sc-20004 AF546), Alexa Fluor® 594 (sc-20004 AF594) or Alexa Fluor® 647 (sc-20004 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20004 AF680) or Alexa Fluor® 790 (sc-20004 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, LAMP-2 (ABL-93) is available conjugated to Alexa Fluor® 405 (sc-20004 AF405, 200 µg/ml), for IF, IHC(P) and FCM.

APPLICATIONS

LAMP-2 (ABL-93) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

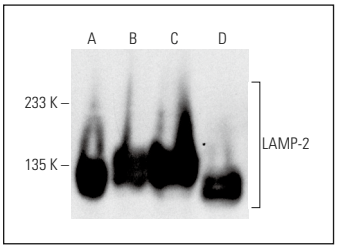
Suitable for use as control antibody for LAMP-2 siRNA (h): sc-29390, LAMP-2 siRNA (m): sc-35791, LAMP-2 shRNA Plasmid (h): sc-29390-SH, LAMP-2 shRNA Plasmid (m): sc-35791-SH, LAMP-2 shRNA (h) Lentiviral Particles: sc-29390-V and LAMP-2 shRNA (m) Lentiviral Particles: sc-35791-V.

Molecular Weight of LAMP-2: 120 kDa.

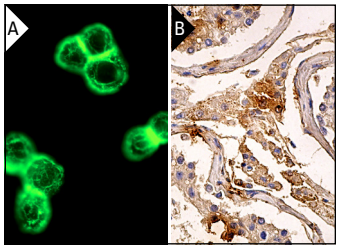
STORAGE

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

DATA



LAMP-2 (ABL-93): sc-20004. Western blot analysis of LAMP-2 expression in NIH/3T3 (**A**), RAW 264.7 (**B**), J774A.1 (**C**) and Sol8 (**D**) whole cell lysates.



LAMP-2 (ABL-93): sc-20004. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells and cells in seminiferous ducts (**B**).

SELECT PRODUCT CITATIONS

1. Azam, M., et al. 2003. Mechanisms of autoinhibition and STI-571/imatinib resistance revealed by mutagenesis of Bcr-Abl. Cell 112: 831-843.
2. Wang, X., et al. 2010. Role of autophagy in sonodynamic therapy-induced cytotoxicity in S180 cells. Ultrasound Med. Biol. 36: 1933-1946.
3. He, Y., et al. 2011. Identification of a lysosomal pathway that modulates glucocorticoid signaling and the inflammatory response. Sci. Signal. 4: ra44.
4. Jank, T., et al. 2012. Domain organization of *Legionella* effector SetA. Cell. Microbiol. 14: 852-868.
5. Kuijl, C., et al. 2013. Rac and Rab GTPases dual effector Nischarin regulates vesicle maturation to facilitate survival of intracellular bacteria. EMBO J. 32: 713-727.
6. Guan, J.J., et al. 2015. DRAM1 regulates apoptosis through increasing protein levels and lysosomal localization of BAX. Cell Death Dis. 6: e1624.
7. Moosavi, M.A., et al. 2016. Photodynamic N-TiO_2 nanoparticle treatment induces controlled Ros-mediated autophagy and terminal differentiation of leukemia cells. Sci. Rep. 6: 34413.
8. Bendinelli, P., et al. 2017. Epigenetic regulation of HGF/Met receptor axis is critical for the outgrowth of bone metastasis from breast carcinoma. Cell Death Dis. 8: e2578.
9. Cai, Y., et al. 2018. Inhibition of endo-lysosomal function exacerbates vascular calcification. Sci. Rep. 8: 3377.
10. Wei, Q., et al. 2019. Low-concentration HCP1 inhibits apoptosis in vascular endothelial cells. Biochem. Biophys. Res. Commun. 511: 92-98.

RESEARCH USE

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