SANTA CRUZ BIOTECHNOLOGY, INC.

LAMP-1 (H4A3): sc-20011

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.

REFERENCES

1. Febbraio, M., et al. 1990. Identification and characterization of LAMP-1 as an activation-dependent platelet surface glycoprotein. J. Biol. Chem. 265: 18531-18537.
2. Salopek, T.G., et al. 1996. Induction of melanogenesis during the various melanoma growth phases and the role of tyrosinase, lysosome-associated membrane proteins, and p90 calnexin in the melanogenesis cascade. J. Investig. Dermatol. Symp. Proc. 1: 195-202.

CHROMOSOMAL LOCATION

Genetic locus: LAMP1 (human) mapping to 13q34; Lamp1 (mouse) mapping to 8 A1.1.

SOURCE

LAMP-1 (H4A3) is a mouse monoclonal antibody raised against adherent spleen cells of human origin.

PRODUCT

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

LAMP-1 (H4A3) is available conjugated to agarose (sc-20011 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-20011 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20011 PE), fluorescein (sc-20011 FITC), Alexa Fluor® 488 (sc-20011 AF488), Alexa Fluor® 546 (sc-20011 AF546), Alexa Fluor® 594 (sc-20011 AF594) or Alexa Fluor® 647 (sc-20011 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20011 AF680) or Alexa Fluor® 790 (sc-20011 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, LAMP-1 (H4A3) is available conjugated to either PerCP (sc-20011 PerCP), PerCP-Cy5.5 (sc-20011 PCPC5) or Alexa Fluor® 405 (sc-20011 AF405), 100 tests in 2 ml, for IF, IHC(P) and FCM.

RESEARCH USE

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

APPLICATIONS

LAMP-1 (H4A3) is recommended for detection of LAMP-1 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).

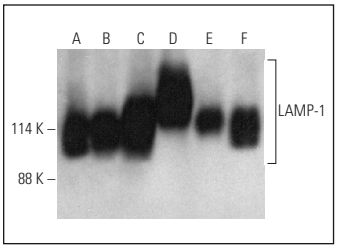
LAMP-1 (H4A3) is also recommended for detection of LAMP-1 in additional species, including monkey.

Suitable for use as control antibody for LAMP-1 siRNA (h): sc-29389, LAMP-1 siRNA (m): sc-35790, LAMP-1 shRNA Plasmid (h): sc-29389-SH, LAMP-1 shRNA Plasmid (m): sc-35790-SH, LAMP-1 shRNA (h) Lentiviral Particles: sc-29389-V and LAMP-1 shRNA (m) Lentiviral Particles: sc-35790-V.

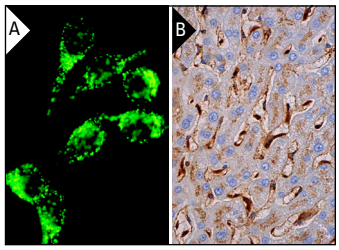
Molecular Weight of LAMP-1: 120 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-937 cell lysate: sc-2239 or ECV304 cell lysate: sc-2269.

DATA



LAMP-1 (H4A3) HRP: sc-20011 HRP. Direct western blot analysis of LAMP-1 expression in HeLa (**A**), JAR (**B**), ECV304 (**C**), U-937 (**D**), Jurkat (**E**) and Ramos (**F**) whole cell lysates.



LAMP-1 (H4A3): sc-20011. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and sinusoidal endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Lohi, O., et al. 1998. EAST, an epidermal growth factor receptor-and Eps15-associated protein with Src homology 3 and tyrosine-based activation motif domains. J. Biol. Chem. 273: 21408-21415.
2. Li, Y., et al. 2019. Transcription factor EB (TFEB)-mediated autophagy protects against ethyl carbamate-induced cytotoxicity. J. Hazard. Mater. 364: 281-292.
3. Stancu, I.C., et al. 2019. Aggregated Tau activates NLRP3-ASC inflammasome exacerbating exogenously seeded and non-exogenously seeded Tau pathology *in vivo*. Acta Neuropathol. 137: 599-617.
4. Xia, Y., et al. 2019. Microglia as modulators of exosomal α-synuclein transmission. Cell Death Dis. 10: 174.

STORAGE

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