SANTA CRUZ BIOTECHNOLOGY, INC.

LAMP-1 (LY1C6): sc-65236

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: Lamp1 (mouse) mapping to 8 A1.1.

SOURCE

LAMP-1 (LY1C6) is a mouse monoclonal antibody raised against LAMP-1 of rat 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 (LY1C6) is available conjugated to agarose (sc-65236 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-65236 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-65236 PE), fluorescein (sc-65236 FITC), Alexa Fluor® 488 (sc-65236 AF488), Alexa Fluor® 546 (sc-65236 AF546), Alexa Fluor® 594 (sc-65236 AF594) or Alexa Fluor® 647 (sc-65236 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-65236 AF680) or Alexa Fluor® 790 (sc-65236 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

LAMP-1 (LY1C6) is recommended for detection of LAMP-1 of mouse and rat 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

LAMP-1 (LY1C6) is also recommended for detection of LAMP-1 in additional species, including hamster.

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

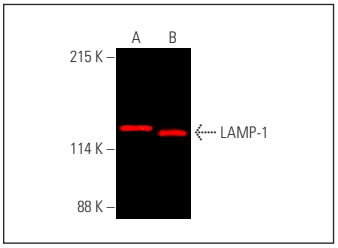
Molecular Weight of LAMP-1: 120 kDa.

Positive Controls: 3611-RF whole cell lysate: sc-2215 or KNRK whole cell lysate: sc-2214.

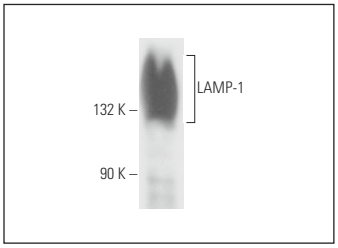
STORAGE

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

DATA



LAMP-1 (LY1C6) Alexa Fluor® 790: sc-65236 AF790. Direct near-infrared western blot analysis of LAMP-1 expression in KNRK (**A**) and T-47D (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



LAMP-1 (LY1C6): sc-65236. Western blot analysis of LAMP-1 expression in 3611-RF whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lee, J.E., et al. 2008. Identification of cell surface markers to differentiate rat endothelial and fibroblast cells using lectin arrays and LC-ESI-MS/MS. Anal. Chem. 80: 8269-8275.
2. Katoh, Y., et al. 2009. The clavesin family, neuron-specific lipid- and Clathrin-binding Sec14 proteins regulating lysosomal morphology. J. Biol. Chem. 284: 27646-27654.
3. Monteiro, O., et al. 2011. Vesicle degradation in dendrites of magnocellular neurones of the rat supraoptic nucleus. Neurosci. Lett. 489: 30-33.
4. Shin, J.H., et al. 2012. Mutation of a positively charged cytoplasmic motif within CD1d results in multiple defects in antigen presentation to NKT cells. J. Immunol. 188: 2235-2243.
5. Wolff, N.A., et al. 2014. Evidence for mitochondrial localization of divalent metal transporter 1 (DMT1). FASEB J. 28: 2134-2145.
6. Zabucchi, G., et al. 2015. NOD1 and NOD2 interact with the phagosome cargo in mast cells: a detailed morphological evidence. Inflammation 38: 1113-1125.
7. Lee, W.K., et al. 2017. Initial autophagic protection switches to disruption of autophagic flux by lysosomal instability during cadmium stress accrual in renal NRK-52E cells. Arch. Toxicol. 91: 3225-3245.
8. Brekk, O.R., et al. 2020. Upregulating β-hexosaminidase activity in rodents prevents α-synuclein lipid associations and protects dopaminergic neurons from α-synuclein-mediated neurotoxicity. Acta Neuropathol. Commun. 8: 127.
9. Vafiadaki, E., et al. 2024. The phospholamban R14del generates pathogenic aggregates by impairing autophagosome-lysosome fusion. Cell. Mol. Life Sci. 81: 450.

RESEARCH USE

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