

LAMP-2 (T-19): sc-34245

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. Kannan, K., et al. 1996. Lysosome-associated membrane proteins h-LAMP1 (CD107a) and h-LAMP2 (CD107b) are activation-dependent cell surface glycoproteins in human peripheral blood mononuclear cells which mediate cell adhesion to vascular endothelium. *Cell. Immunol.* 171: 10-19.
3. 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.
4. Karlsson, K., et al. 1998. Sorting of lysosomal membrane glycoproteins lamp-1 and lamp-2 into vesicles distinct from mannose 6-phosphate receptor/ γ -adaptin vesicles at the *trans*-Golgi network. *J. Biol. Chem.* 273: 18966-18973.
5. Sarafian, V., et al. 1998. Expression of LAMP-1 and LAMP-2 and their interactions with galectin-3 in human tumor cells. *Int. J. Cancer* 75: 105-111.

CHROMOSOMAL LOCATION

Genetic locus: Lamp2 (rat) mapping to Xq11.

SOURCE

LAMP-2 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LAMP-2 of rat origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34245 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LAMP-2 (T-19) is recommended for detection of LAMP-2 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of LAMP-2: 120 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Ladinsky, M.S., et al. 2012. Electron tomography of late stages of FcRn-mediated antibody transcytosis in neonatal rat small intestine. *Mol. Biol. Cell* 23: 2537-2545.
2. Lee, J.Y., et al. 2012. Alteration of the cerebral zinc pool in a mouse model of Alzheimer disease. *J. Neuropathol. Exp Neurol.* 71: 211-222.

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.

PROTOCOLS

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