

# LAMP-2 (D-20): sc-34241

## 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/ $\gamma$ -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.
6. Hua, C.T., et al. 1998. Evaluation of the lysosome-associated membrane protein LAMP-2 as a marker for lysosomal storage disorders. *Clin. Chem.* 44: 2094-2102.

## CHROMOSOMAL LOCATION

Genetic locus: LAMP2 (human) mapping to Xq24; Lamp2 (mouse) mapping to X A3.2.

## SOURCE

LAMP-2 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LAMP-2 of human origin.

## STORAGE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-34241 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

LAMP-2 (D-20) is recommended for detection of LAMP-2 of human and, to a lesser extent, 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).

Suitable for use as control antibody for LAMP-2 siRNA (h): sc-29390.

Molecular Weight of LAMP-2: 120 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, JAR cell lysate: sc-2276 or ECV304 cell lysate: sc-2269.

## 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **LAMP-2 (H4B4): sc-18822** or **LAMP-2 (ABL-93): sc-20004**, our highly recommended monoclonal alternatives to LAMP-2 (D-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **LAMP-2 (H4B4): sc-18822**.