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 (human) mapping to 13q34; Lamp1 (mouse) mapping to 8A1.1.

SOURCE

LAMP-1 (1D4B) is a rat monoclonal antibody raised against NIH/3T3 mouse embryo fibroblast tissue culture cell membranes.

PRODUCT

Each vial contains 200 µg IgG2α in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LAMP-1 (1D4B) is available conjugated to either phycoerythrin (sc-19992 PE), fluorescein (sc-19992 FITC), Alexa Fluor® 488 (sc-19992 AF488) or Alexa Fluor® 647 (sc-19992 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

In addition, LAMP-1 (1D4B) is available conjugated to Alexa Fluor® 405 (sc-19992 AF405), 100 µg/2 ml, for IF, IHC(P) and FCM.

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

APPLICATIONS

LAMP-1 (1D4B) 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) and flow cytometry (1 µg per 1 x 10⁶ cells).

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-29383-SH, LAMP-1 shRNA Plasmid (m): sc-35790-SH, LAMP-1 shRNA (h) LentiViral Particles: sc-29383-V and LAMP-1 shRNA (m) LentiViral Particles: sc-35790-V.

Molecular Weight of LAMP-1: 120 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Sol8 cell lysate: sc-2249 or RAW 264.7 whole cell lysate: sc-2211.

RESEARCH USE

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

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 (1D4B): sc-19992. Western blot analysis of LAMP-1 expression in NIH/3T3 (A), RAW 264.7 (B), J774A.1 (C) and Sol8 (D) whole cell lysates.

LAMP-1 (1D4B): sc-19992. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing cytoplasmic staining of hepatocytes (B).

SELECT PRODUCT CITATIONS


See LAMP-1 (H4A3): sc-20011 for LAMP-1 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.