12170 Flint Place
Poway, CA 92064
www.prosci-inc.com

Toll Free: 888-513-9525
Tel: 858-513-2638
Fax: 858-513-2692
techsupport@prosci-inc.com

LAMP-1 Antibody

LAMP-1: Lysosome associated membrane protein 1

CATALOG NO.: 3629

BACKGROUND:

Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tum or cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components (1,2) and is negatively regulated by TOR (Target of rapamycin) (3). A protein recently found to be involved in autophagy, LAMP-2, is a highly glycosylated protein associated with the lysosome (4,5). LAMP-1 shares much homology to LAMP-2 and is thought to have overlapping functions. Mice lacking LAMP-1 had very minor defects compared to those deficient in LAMP-2 expression (6). However, the loss of both proteins resulted in embryonic lethality (7), suggesting that each protein possesses some unique and necessary functions.

SOURCE:

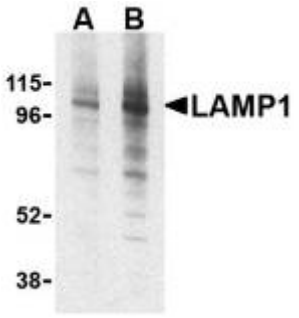
Rabbit polyclonal LAMP-1 antibody was raised against a 15 amino acid peptide from near the center of human LAMP-1 (Genbank accession No. NP_005552).

STORAGE:

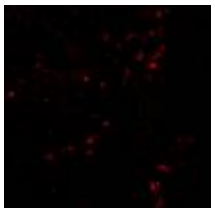
LAMP-1 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4˚C, stable for one year.

APPLICATION:

LAMP-1 antibody can be used for the detection of LAMP-1 by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user). EL4 cell lysate can be used as positive control. Despite its predicted size, LAMP-1 migrates at 110kDa in SDS-PAGE. LAMP-1 antibody is human, mouse, and rat reactive. **This product is for research use only.**



Western blot analysis of LAMP-1 in EL4 cell lysate with LAMP-1 antibody at (A) 1 and (B) 2 µg/ml.



Immunofluorescence of LAMP-1 in human colon tissue with LAMP-1 antibody at 20 µg/ml.

RELATED PRODUCTS:

Blocking peptide, Catalog No. **3629P.**
EL4 Cell Lysate, Catalog No. **1287.**
LAMP-2 Antibody, Catalog No. **3627.**
TOR Antibody, Catalog No. **3485.**

REFERENCES:

1. Gozuacik D and Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. *Oncogene.* 2004; 23:2891-906.
2. Kisen GO, Tessitore L, Costelli P, et al. Reduced autophagic activity in primary rat hepatocellular carcinoma and ascites hepatoma cells. *Carcinogenesis* 1993; 14:2501-5.
3. Kamada Y, Funakoshi T, Shintani T, et al. Tor-mediated induction of autophagy via Apg1 protein kinase complex. *J. Cell. Biol.* 2000; 150:1507-13.
4. Chen JW, Murphy TL, Willingham MC, et al. Identification of two lysosomal membrane glycoproteins. *J. Cell Biol.* 1985; 101:85-95.
5. Tanaka Y, Guhde G, Suter A, et al. Accumulation of autophagic vacuoles and cardiopathy in LAMP-2-deficient mice. *Nature* 2000; 902-6.
6. Andrejewski N, Punnonen EL, Guhde G, et al. Normal lysosomal morphology and function in LAMP-1-deficient mice. *J. Biol. Chem.* 1999; 274:12692-701.
7. Gamp AC, Tanaka Y, Lullmann-Rauch R, et al. LIMP-2/LGP85 deficiency causes ureteric pelvic junction obstruction, deafness, and peripheral neuropathy in mice. *Hum. Mol. Genetic.* 2003; 12:631-46.

(07-01D)