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LAMP-1 Antibody

Catalog # ASC10365

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P11279
Other Accession	NP_005552, 112380628
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	44882
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	LAMP-1 antibody can be used for the detection of LAMP-1 by Western blot at 1 - 2 □g/mL. Antibody can also be used for immunohistochemistry starting at 20 □g/mL. For immunofluorescence start at 20 □g/mL.

Additional Information

Gene ID	3916
Other Names	LAMP-1 Antibody: LAMPA, CD107a, LGP120, Lysosome-associated membrane glycoprotein 1, CD107 antigen-like family member A, LAMP-1, lysosomal-associated membrane protein 1
Target/Specificity	LAMP1; LAMP-1 antibody is predicted to not cross-react with LAMP-2. Due to extensive post-translational modification, LAMP-1 often migrates at higher than predicted molecular weight in SDS-PAGE.
Reconstitution & Storage	LAMP-1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	LAMP-1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LAMP1 {ECO:0000303|PubMed:23632890, ECO:0000312|HGNC:HGNC:6499}
Function	Lysosomal membrane glycoprotein which plays an important role in lysosome biogenesis, lysosomal pH regulation, autophagy and cholesterol homeostasis (PubMed:37390818). Acts as an important regulator of lysosomal lumen pH regulation by acting as a direct inhibitor of the proton channel TMEM175, facilitating lysosomal acidification for optimal hydrolase activity (PubMed:37390818). Also plays an important role in NK-cells cytotoxicity

(PubMed:2022921, PubMed:23632890). Mechanistically, participates in cytotoxic granule movement to the cell surface and perforin trafficking to the lytic granule (PubMed:23632890). In addition, protects NK-cells from degranulation-associated damage induced by their own cytotoxic granule content (PubMed:23847195). Presents carbohydrate ligands to selectins (PubMed:7685349).

Cellular Location

Lysosome membrane; Single-pass type I membrane protein. Endosome membrane; Single- pass type I membrane protein. Late endosome membrane; Single-pass type I membrane protein. Cell membrane; Single-pass type I membrane protein. Cytolytic granule membrane; Single-pass type I membrane protein. Note=This protein shuttles between lysosomes, endosomes, and the plasma membrane (By similarity). Colocalizes with OSBPL1A at the late endosome (PubMed:16176980). {ECO:0000250|UniProtKB:P05300, ECO:0000269|PubMed:16176980, ECO:0000269|PubMed:17897319}

Background

LAMP-1 Antibody: 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 tumor cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components and is negatively regulated by TOR (Target of rapamycin). A protein recently found to be involved in autophagy, LAMP-2, is a highly glycosylated protein associated with the lysosome. 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. However, the loss of both proteins resulted in embryonic lethality, suggesting that each protein possesses some unique and necessary functions.

References

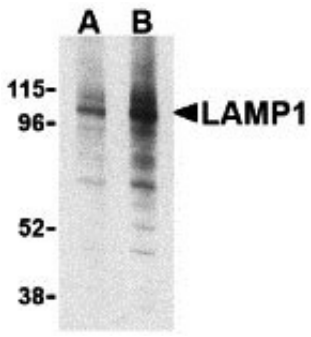
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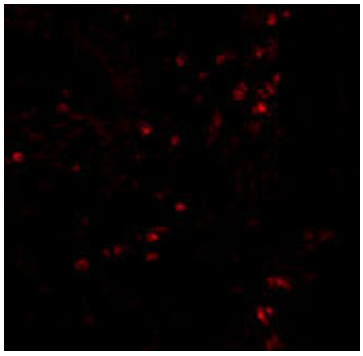
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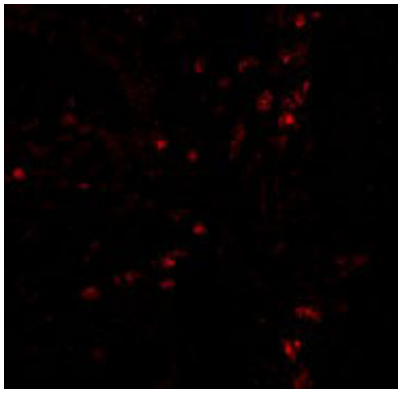
Images



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.





Immunofluorescence of LAMP-1 in Human Colon cells with LAMP-1 antibody at 20 µg/mL.

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