

LAMP1 Antibody [Knockout Validated]

Purified Mouse Monoclonal Antibody (Mab) Catalog # AM8465b

Specification

LAMP1 Antibody [Knockout Validated] - Product Information

Application Primary Accession Reactivity Host Clonality Isotype WB, IHC-P, IF,E <u>P11279</u> Human, Green Monkey Mouse monoclonal IgG1,k

LAMP1 Antibody [Knockout Validated] - Additional Information

Gene ID 3916

Other Names Lysosome-associated membrane glycoprotein 1, LAMP-1, Lysosome-associated membrane protein 1, CD107 antigen-like family member A, CD107a, LAMP1

Target/Specificity This LAMP1 antibody is generated from a mouse immunized with a recombinant protein.

Dilution WB~~1:2000 IHC-P~~1:25 IF~~1:25 E~~Use at an assay dependent concentration.

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions LAMP1 Antibody [Knockout Validated] is for research use only and not for use in diagnostic or therapeutic procedures.

LAMP1 Antibody [Knockout Validated] - 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:<u>37390818</u>).



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:<u>37390818</u>). Also plays an important role in NK-cells cytotoxicity (PubMed:<u>2022921</u>, PubMed:<u>23632890</u>). Mechanistically, participates in cytotoxic granule movement to the cell surface and perforin trafficking to the lytic granule (PubMed:<u>23632890</u>). In addition, protects NK-cells from degranulation-associated damage induced by their own cytotoxic granule content (PubMed:<u>23847195</u>). Presents carbohydrate ligands to selectins (PubMed:<u>7685349</u>).

Cellular Location

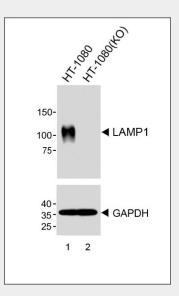
Lysosome membrane; Single-pass type I membrane protein. Endosome membrane; Single-pass type I membrane protein. Late endosome membrane; Single-pass type I membrane protein. Cell membrane; Single-pass type I membrane protein. Cytolytic granule membrane; Single-pass type I membrane protein shuttles between 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}

LAMP1 Antibody [Knockout Validated] - Protocols

Provided below are standard protocols that you may find useful for product applications.

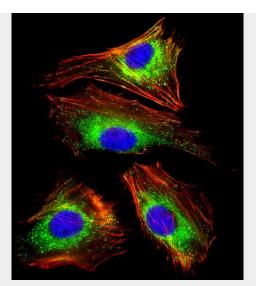
- <u>Western Blot</u>
- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

LAMP1 Antibody [Knockout Validated] - Images

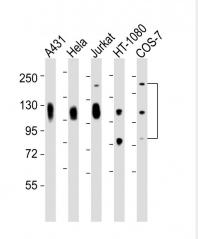


All lanes : Anti-LAMP1 Antibody at 1:1000 dilution (upper) Lane 1: HT1080 Lane 2: HT1080-Knockout Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Predicted band size : 90-120 kDa



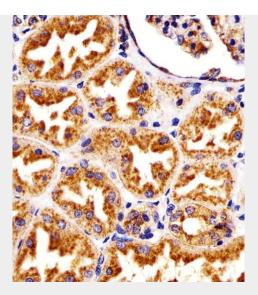


Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling LAMP1 with AM8465b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red).The nuclear counter stain is DAPI (blue).



All lanes : Anti-LAMP1 Antibody at 1:2000 dilution Lane 1: A431 whole cell lysates Lane 2: Hela whole cell lysates Lane 3: Jurkat whole cell lysates Lane 4: HT-1080 whole cell lysates Lane 5: COS-7 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse lgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 45 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





AM8465b staining LAMP1 in human kidney sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

LAMP1 Antibody [Knockout Validated] - Background

Presents carbohydrate ligands to selectins. Also implicated in tumor cell metastasis.

LAMP1 Antibody [Knockout Validated] - References

Fukuda M.,et al.J. Biol. Chem. 263:18920-18928(1988). Ota T.,et al.Nat. Genet. 36:40-45(2004). Dunham A.,et al.Nature 428:522-528(2004). Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases. Mane S.M.,et al.Arch. Biochem. Biophys. 268:360-378(1989).

LAMP1 Antibody [Knockout Validated] - Citations

- Effect of Protein O-Mannosyltransferase (MSMEG_5447) on and Its Survival in Macrophages
- <u>L-3-n-Butylphthalide improves synaptic and dendritic spine plasticity and ameliorates</u> <u>neurite pathology in Alzheimer's disease mouse model and cultured hippocampal neurons</u>
- AXL Mediates Esophageal Adenocarcinoma Cell Invasion through Regulation of Extracellular Acidification and Lysosome Trafficking.