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PRODUCT DATASHEET

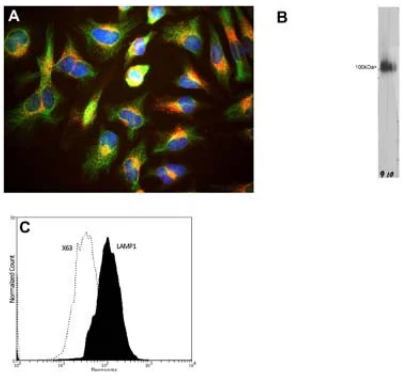
Anti-Lysosomal Associated Membrane Protein 1 (LAMP1) Antibody

Product Details

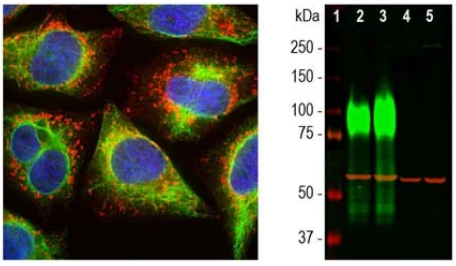
Available Variants	100 µg (SKU:M-1690-100)
Conjugate	Unconjugated
Isotype	IgG1
Clone	5H6
Host Species	Mouse
Format	IgG
Physical State	Lyophilized
Buffer	Lyophilized from PBS buffer pH 7.2-7.6 with 0.1% trehalose, and sodium azide
Production Notes	Protein G purified
Applications	Flow, ICC, WB
Dilution Ranges	WB: 1:5000-1:10000 ICC: 1:1000-1:2000
Species Reactivity	Human
Immunogen	Recombinant LAMP1 expressed and purified from E. coli.
Specificity	The antibody reacts with a diffuse band at ~90 kDa to 120 kDa by Western blot on HeLa cell extract. It has also been used successfully for immunocytochemistry showing strong punctate cytoplasmic staining corresponding to lysosomes and late endosomes. Does not react with rodent protein.
Molecular Weight	90-120 kDa
Storage	Spin vial briefly before opening. Reconstitute in 100 uL sterile-filtered, ultrapure water. Centrifuge to remove any insoluble material. Concentration will be 1

	mg/mL (100 µg/100 µL).After reconstitution of lyophilized antibody, aliquot and store at -20°C for a higher stability. Avoid freeze-thaw cycles.
UniProt ID	P11279 UniProt Summary: Lysosomal membrane glycoprotein which plays an important role in lysosome biogenesis, lysosomal pH regulation, autophagy and cholesterol homeostasis. 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. Also plays an important role in NK-cells cytotoxicity. Mechanistically, participates in cytotoxic granule movement to the cell surface and perforin trafficking to the lytic granule. In addition, protects NK-cells from degranulation-associated damage induced by their own cytotoxic granule content. Presents carbohydrate ligands to selectins.
Country of Origin	United States
Shipping	25°C (ambient)
Expiration	12 months after date of receipt (unopened vial).
Usage Statement	For research use only.
NCBI Gene ID	3916

Product Images



A: HeLa cell staining with M-1690-100 (red), and counterstained with chicken polyclonal antibody to Vimentin C-1409-50 (green) and DNA (blue). The LAMP1 antibody reveals strong punctate cytoplasmic staining corresponding to lysosomes and late endosomes, while the Vimentin antibody reveals cytoplasmic intermediate filaments. B: Western blot of HeLa cell crude extract stained with M-1690-100 (lane 9). The antibody binds to a diffuse band running at between 90 and 120 kDa. C: Analysis of LAMP1 expression in human neuroblastoma SH-SY5Y cell line by Flow Cytometry. Fixing and Permeabilization of cells: Absolute methanol (10 minutes in ice) and 0.1% Tween-20 in PBS, Blocking: 1% BSA, Primary antibody: Mouse Monoclonal antibody to LAMP1 (cat # M-1690-100, 2µg per ~10^6 cells) for 30 minutes at room temperature, Secondary antibody: Goat anti-mouse PE labeled secondary antibody (1:100 fold dilution) with incubation for 20 minutes in dark at room temperature. Non-specific Control IgG, clone X63 (cat # M-1249-100) was used as negative control under same conditions (black dashed). Flow cytometry data and results were generated using Orflo MoxiflowTM instrument and protocols.



Left: Detection of LAMP1 protein in HeLa cells by **Immunocytochemistry**. LAMP1 was stained with mouse antibody to LAMP1 (red, 1:500), and co-stained with chicken antibody to vimentin (C-1409-50, green, 1:10,000). Blue: DAPI nuclear stain. The cells were treated with 50 uM chloroquine, an inhibitor of autophagy, for 16 hours prior to staining. The LAMP1 antibody reveals vesicular staining of LAMP1 protein accumulated in swollen lysosomes, while the vimentin antibody specifically labels the intermediate filament network in these cells. **Right: Western blot** analysis of LAMP1 protein expression in cell lysates using mouse antibody to LAMP1 (green, 1:10,000). Cells were maintained under normal conditions (Ct), or treated with 50 uM chloroquine (CQ), an inhibitor of autophagy, for 24 hours: [1] protein standard, [2] HeLa Ct, [3] HeLa+CQ, [4] NIH-3T3 Ct, and [5] NIH-3T3+CQ. The smeared band between 75-120 kDa rresponds to variably glycosylated forms of the LAMP1 protein detected only in the human cells, this antibody does not recognize the rodent LAMP1 homologue. The same blot was probed with a chicken antibody to HSP60 (red, lanes 2-5).