Anti-LAMP1 Antibody [PSH05-55]

HA722302

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse
Applications:	WB, IF-Cell, IHC-P, FC, IP, IF-Tissue, IHC-Fr
Molecular Wt:	Predicted band size: 44 kDa
Clone number:	PSH05-55

Description: Lysosomal-associated membrane protein 1 (LAMP-1) also known as lysosome-associated membrane glycoprotein 1 and CD107a (Cluster of Differentiation 107a), is a protein that in humans is encoded by the LAMP1 gene. The human LAMP1 gene is located on the long arm (q) of chromosome 13 at region 3, band 4 (13q34).Immunofluorescence staining of HeLa Cells with antibody to reveal lysosomal LAMP1 in red and vimentin containing intermediate filaments in green. Nuclear DNA is seen in blue. Antibodies and image courtesy EnCor Biotechnology Inc.Lysosomal-associated membrane protein 1 is a glycoprotein from a family of Lysosome-associated membrane glycoproteins.The LAMP-1 glycoprotein is a type I transmembrane protein which is expressed at high or medium levels in at least 76 different normal tissue cell types.It resides primarily across lysosomal membranes,and functions to provide selectins with carbohydrate ligands. CD107a has also been shown to be a marker of degranulation on lymphocytes such as CD8+ and NK cells. and may also play a role in tumor cell differentiation and metastasis.

Immunogen: Recombinant protein.

Positive control: C2C12 cell lysate, NIH/3T3 cell lysate, RAW264.7 cell lysate, NIH/3T3, mouse colon tissue, mouse kidney tissue, mouse brain tissue.

Subcellular location: Lysosome membrane, Endosome membrane, Late endosome membrane, Cell membrane, Cytolytic granule membrane.

Database links: SwissProt: P11438 Mouse

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100
IHC-P	1:1,000
FC	1:1,000
IP	1-2μg/sample
IF-Tissue	1:200
IHC-Fr	1:500-1:1,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

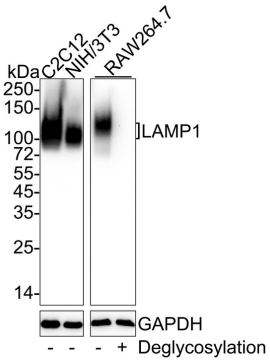

Fig1: Western blot analysis of LAMP1 on different lysates with Rabbit anti-LAMP1 antibody (HA722302) at 1/1,000 dilution.

Lane 1: C2C12 cell lysate
Lane 2: NIH/3T3 cell lysate
Lane 3: RAW264.7 cell lysate
Lane 4: RAW264.7 cell lysate treated with deglycosylation

Lysates/proteins at 30 µg/Lane.

Predicted band size: 44 kDa
Observed band size: 100-120 kDa

Exposure time: 9 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722302) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

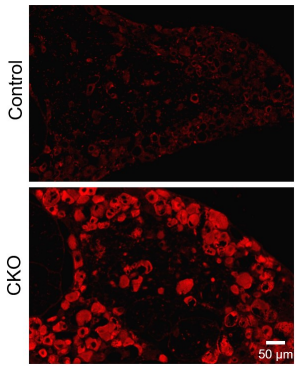

Fig2: Application: IHC-Fr

Species: Mouse

Site: Dorsal root ganglion

Sample: Frozen section

Antibody concentration: 1: 500

Data by conrtesy of: Mr. Rongyao Ye, School of Basic Medical Sicences, Zhejiang University

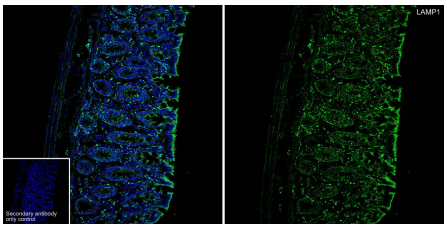

Fig3: Application: IHC-Fr

Species: Mouse

Site: Colon

Sample: Frozen section

Antibody concentration: 1: 500

Antigen retrieval: Not required

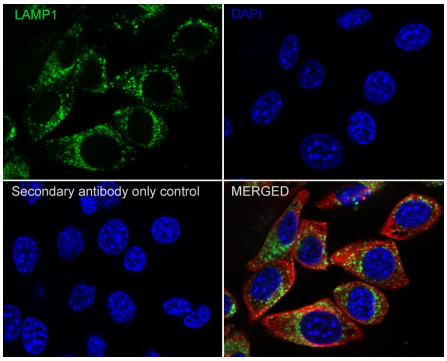

Fig4: Immunocytochemistry analysis of NIH/3T3 cells labeling LAMP1 with Rabbit anti-LAMP1 antibody (HA722302) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-LAMP1 antibody (HA722302) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

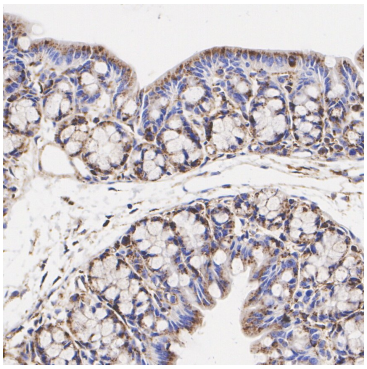

Fig5: Immunohistochemical analysis of paraffin-embedded mouse colon tissue with Rabbit anti-LAMP1 antibody (HA722302) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722302) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

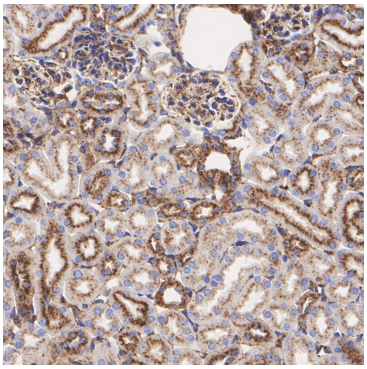

Fig6: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-LAMP1 antibody (HA722302) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722302) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

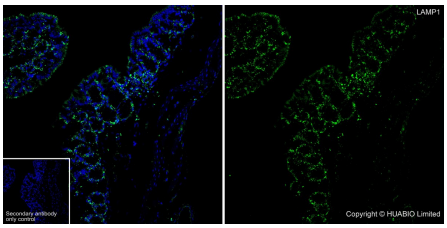

Fig7: Application: Immunofluorescence (IF-tissue)

Species: Mouse
Tissue: Colon
Sample: Paraffin-embedded section

Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95℃.

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.
Primary antibody: HA722302, 1/200, overnight at 4℃.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

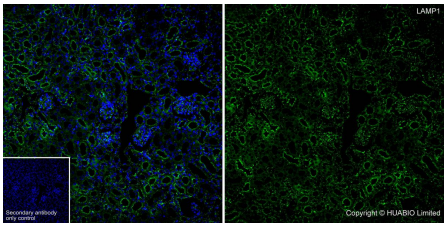

Fig8: Application: Immunofluorescence (IF-tissue)

Species: Mouse
Tissue: Kidney
Sample: Paraffin-embedded section

Antigen retrieval: Heat-mediated, Tris-EDTA buffer (pH 9.0), 20 minutes at 95℃.

Wash buffer: 1× TBST
Blocking: 10% normal goat serum + 1% Triton X-100 + 0.3 M Glycine in TBST, 30 minutes at room temperature.
Primary antibody: HA722302, 1/200, overnight at 4℃.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 1.5 hours at room temperature.

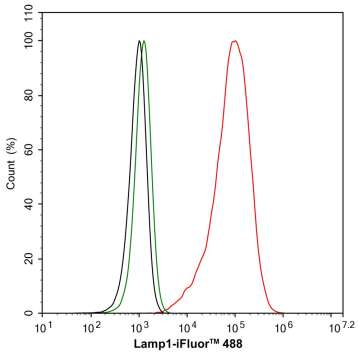

Fig9: Flow cytometric analysis of NIH/3T3 cells labeling LAMP1.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA722302, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

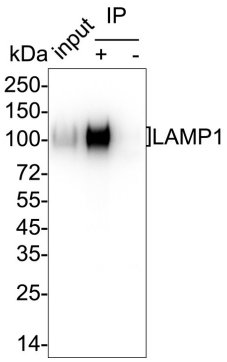

Fig10: LAMP1 was immunoprecipitated from 0.2 mg NIH/3T3 cell lysate with HA722302 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA722302 at 1/1,000 dilution. Anti-Rabbit IgG for IP, AlpSdAbs® VHH(HRP) (025-100-005) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: NIH/3T3 cell lysate (input)
Lane 2: HA722302 IP in NIH/3T3 cell lysate
Lane 3: Rabbit IgG instead of HA722302 in NIH/3T3 cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 3 seconds; ECL: K1801

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Chaudhry N et al. Lamp1 mediates lipid transport, but is dispensable for autophagy in Drosophila. Autophagy. 2022 Oct
2. Krzystek TJ et al. HTT (huntingtin) and RAB7 co-migrate retrogradely on a signaling LAMP1-containing late endosome during axonal injury. Autophagy. 2023 Apr