abcam

Product datasheet

Anti-LAMP1 antibody [EPR4204] - Lysosome Marker ab108597

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-LAMP1 antibody [EPR4204] - Lysosome Marker
Description	Rabbit monoclonal [EPR4204] to LAMP1 - Lysosome Marker
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt,ICC/IF or IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, JAR, A431 and Jurkat lysates. IHC-P: human liver carcinoma and kidney tissue.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR4204
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab108597 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

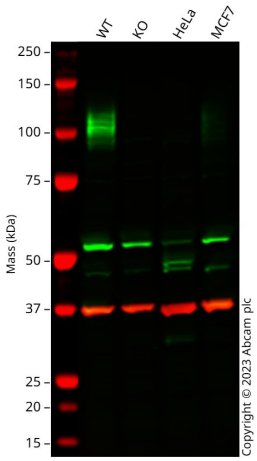
Application	Abreviews	Notes
WB	★★★☆☆ (2)	1/1000 - 1/10000. Detects a band of approximately 120 kDa (predicted molecular weight: 45 kDa).
IHC-P	★★★★☆ (1)	1/100 - 1/400. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt,ICC/IF or IP.

Target

Function	Presents carbohydrate ligands to selectins. Also implicated in tumor cell metastasis.
Sequence similarities	Belongs to the LAMP family.
Post-translational modifications	O- and N-glycosylated; some of the 18 N-linked glycans are polylactosaminoglycans.
Cellular localization	Cell membrane. Endosome membrane. Lysosome membrane. This protein shuttles between lysosomes, endosomes, and the plasma membrane.

Images



Western blot - Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597)

All lanes : Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597) at 1/1000 dilution

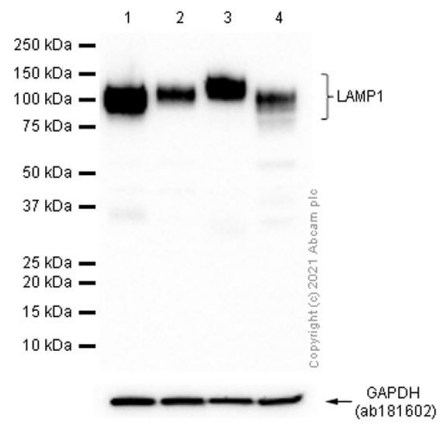
Lane 1 : Wild-type HCT 116 cell lysate
Lane 2 : LAMP1 knockout HCT 116 cell lysate
Lane 3 : HeLa cell lysate
Lane 4 : MCF7 cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 45 kDa
Observed band size: 100-120 kDa

Western blot: Anti-LAMP1 antibody [EPR4204] - Lysosome Marker staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab108597 was shown to bind specifically to LAMP1. A band was observed at 100-120 kDa in wild-type HCT 116 cell lysates with no signal observed at this size in LAMP1 knockout cell line. To generate this image, wild-type and LAMP1 knockout HCT 116 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% milk in TBS-0.1% Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597)

All lanes : Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597) at 1/5000 dilution

Lane 1 : HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate 20µg
Lane 2 : Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate 20µg
Lane 3 : HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate 20µg
Lane 4 : MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate 20µg

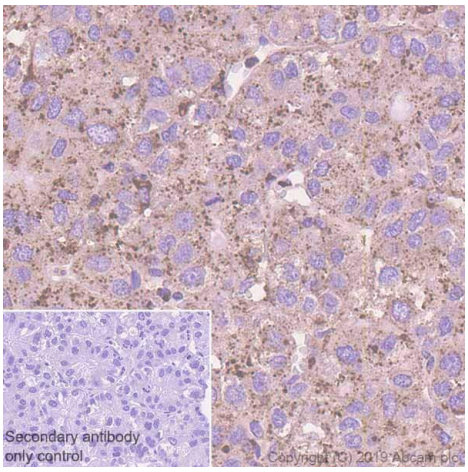
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 45 kDa
Observed band size: 110 kDa

Exposure time: 5 seconds

LAMP1 is a glycoprotein. The molecular weight observed is consistent with what has been described in the literature (PMID:

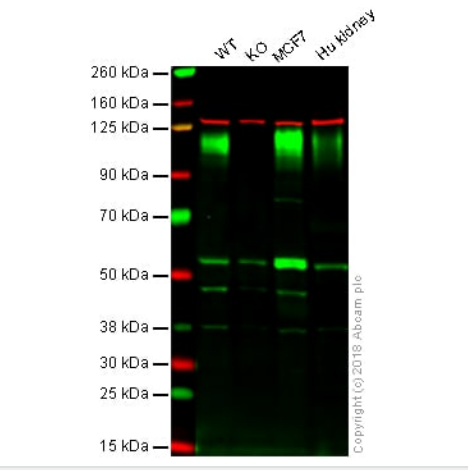
27061067, 15111122).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human liver carcinoma tissue sections labeling LAMP1 with purified ab108597 at 1/400 dilution (0.36 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody.

Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597)

All lanes : Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : LAMP1 knockout HAP1 whole cell lysate
Lane 3 : MCF7 whole cell lysate
Lane 4 : Human Kidney whole cell lysate

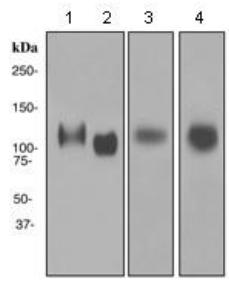
Lysates/proteins at 20 µg per lane.

Predicted band size: 45 kDa
Observed band size: 110 kDa

Lanes 1 - 4: Merged signal (red and green). Green - unpurified ab108597 observed at 110 kDa. Red - loading control, **ab18058**, observed at 130 kDa.

ab108597 was shown to recognize LAMP1 in wild-type HAP1 cells as signal was lost at the expected MW in LAMP1 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and LAMP1 knockout samples were subjected to SDS-PAGE. ab108597 and **ab18058** (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed

ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



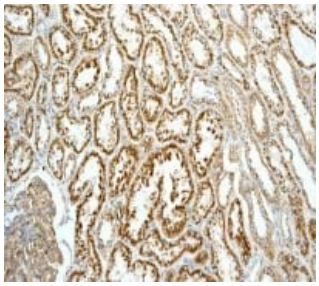
Western blot - Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597)

All lanes : Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597) at 1/1000 dilution ((unpurified))

Lane 1 : HeLa cell lysate
Lane 2 : JAR cell lysate
Lane 3 : Jurkat cell lysate
Lane 4 : A431 cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 45 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597)

Immunohistochemical analysis of LAMP1 in paraffin embedded Human kidney tissue, using unpurified ab108597 at a dilution of 1/100.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Anti-LAMP1 antibody [EPR4204] - Lysosome Marker (ab108597)

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