

LAMP2 / CD107b Antibody (clone H4B4)
Mouse Monoclonal Antibody
Catalog # ALS16339**Specification**

LAMP2 / CD107b Antibody (clone H4B4) - Product Information

Application	WB, IHC-P, ICC, IHC-F, FC
Primary Accession	P13473
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	45kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A ICC~~N/A IHC-F~~N/A FC~~1:10~50

LAMP2 / CD107b Antibody (clone H4B4) - Additional Information**Gene ID** 3920**Other Names**

Lysosome-associated membrane glycoprotein 2, LAMP-2, Lysosome-associated membrane protein 2, CD107 antigen-like family member B, CD107b, LAMP2

Target/Specificity

Monoclonal antibody H4B4 recognizes CD107b / LAMP-2, an extensively glycosylated 100-120 kD widely expressed lysosome-associated protein.

Reconstitution & Storage

Store at 2-8°C. Do not freeze.

Precautions

LAMP2 / CD107b Antibody (clone H4B4) is for research use only and not for use in diagnostic or therapeutic procedures.

LAMP2 / CD107b Antibody (clone H4B4) - Protein Information**Name** LAMP2**Function**

Lysosomal membrane glycoprotein which plays an important role in lysosome biogenesis, lysosomal pH regulation and autophagy (PubMed:11082038, PubMed:18644871, PubMed:24880125, PubMed:27628032, PubMed:<a

[36586411](http://www.uniprot.org/citations/36586411), PubMed: [37390818](http://www.uniprot.org/citations/37390818), PubMed: [8662539](http://www.uniprot.org/citations/8662539)). 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](http://www.uniprot.org/citations/37390818)). Plays an important role in chaperone-mediated autophagy, a process that mediates lysosomal degradation of proteins in response to various stresses and as part of the normal turnover of proteins with a long biological half-life (PubMed: [11082038](http://www.uniprot.org/citations/11082038), PubMed: [18644871](http://www.uniprot.org/citations/18644871), PubMed: [24880125](http://www.uniprot.org/citations/24880125), PubMed: [27628032](http://www.uniprot.org/citations/27628032), PubMed: [36586411](http://www.uniprot.org/citations/36586411), PubMed: [8662539](http://www.uniprot.org/citations/8662539)). Functions by binding target proteins, such as GAPDH, NLRP3 and MLLT11, and targeting them for lysosomal degradation (PubMed: [11082038](http://www.uniprot.org/citations/11082038), PubMed: [18644871](http://www.uniprot.org/citations/18644871), PubMed: [24880125](http://www.uniprot.org/citations/24880125), PubMed: [36586411](http://www.uniprot.org/citations/36586411), PubMed: [8662539](http://www.uniprot.org/citations/8662539)). In the chaperone-mediated autophagy, acts downstream of chaperones, such as HSPA8/HSC70, which recognize and bind substrate proteins and mediate their recruitment to lysosomes, where target proteins bind LAMP2 (PubMed: [36586411](http://www.uniprot.org/citations/36586411)). Plays a role in lysosomal protein degradation in response to starvation (By similarity). Required for the fusion of autophagosomes with lysosomes during autophagy (PubMed: [27628032](http://www.uniprot.org/citations/27628032)). Cells that lack LAMP2 express normal levels of VAMP8, but fail to accumulate STX17 on autophagosomes, which is the most likely explanation for the lack of fusion between autophagosomes and lysosomes (PubMed: [27628032](http://www.uniprot.org/citations/27628032)). Required for normal degradation of the contents of autophagosomes (PubMed: [27628032](http://www.uniprot.org/citations/27628032)). Required for efficient MHC class II-mediated presentation of exogenous antigens via its function in lysosomal protein degradation; antigenic peptides generated by proteases in the endosomal/lysosomal compartment are captured by nascent MHC II subunits (PubMed: [15894275](http://www.uniprot.org/citations/15894275), PubMed: [20518820](http://www.uniprot.org/citations/20518820)). Is not required for efficient MHC class II-mediated presentation of endogenous antigens (PubMed: [20518820](http://www.uniprot.org/citations/20518820)).

Cellular Location

Lysosome membrane {ECO:0000255|PROSITE-ProRule:PRU00740, ECO:0000269|PubMed:11082038, ECO:0000269|PubMed:17897319, ECO:0000269|PubMed:18644871, ECO:0000269|PubMed:2912382}; Single-pass type I membrane protein {ECO:0000255|PROSITE-ProRule:PRU00740, ECO:0000269|PubMed:17897319} Endosome membrane; Single-pass type I membrane protein {ECO:0000255|PROSITE-ProRule:PRU00740, ECO:0000269|PubMed:17897319}. Cell membrane; Single-pass type I membrane protein {ECO:0000255|PROSITE-ProRule:PRU00740, ECO:0000269|PubMed:17897319}. Cytoplasmic vesicle, autophagosome membrane {ECO:0000250|UniProtKB:P17047}. Note=This protein shuttles between lysosomes, endosomes, and the plasma membrane

Tissue Location

Isoform LAMP-2A is highly expressed in placenta, lung and liver, less in kidney and pancreas, low in brain and skeletal muscle (PubMed:26856698, PubMed:7488019). Isoform LAMP-2B is detected in spleen, thymus, prostate, testis, small intestine, colon, skeletal muscle, brain, placenta, lung, kidney, ovary and pancreas and liver (PubMed:26856698, PubMed:7488019). Isoform LAMP-2C is

detected in small intestine, colon, heart, brain, skeletal muscle, and at lower levels in kidney and placenta (PubMed:26856698).

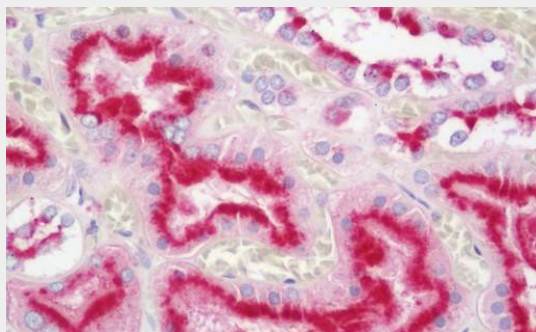
Volume

50 µl

LAMP2 / CD107b Antibody (clone H4B4) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

LAMP2 / CD107b Antibody (clone H4B4) - Images

Anti-LAMP2 / CD107b antibody IHC staining of human kidney.

LAMP2 / CD107b Antibody (clone H4B4) - Background

Implicated in tumor cell metastasis. May function in protection of the lysosomal membrane from autodigestion, maintenance of the acidic environment of the lysosome, adhesion when expressed on the cell surface (plasma membrane), and inter- and intracellular signal transduction. Protects cells from the toxic effects of methylating mutagens.

LAMP2 / CD107b Antibody (clone H4B4) - References

- Fukuda M.,et al.J. Biol. Chem. 263:18920-18928(1988).
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Fritz G.,et al.J. Biol. Chem. 268:21102-21112(1993).
Konecki D.S.,et al.Biochem. Biophys. Res. Commun. 205:1-5(1994).
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