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LAMP2 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP1824c

Specification

LAMP2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P13473

LAMP2 Antibody (Center) Blocking Peptide - 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
The synthetic peptide sequence used to generate the antibody AP1824c was selected from the Center region of human LAMP2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LAMP2 Antibody (Center) Blocking Peptide - Protein Information

Name LAMP2

Function
Lysosomal membrane glycoprotein which plays an important role in lysosome biogenesis, lysosomal pH regulation and autophagy (PubMed:8662539, PubMed:11082038, PubMed:18644871, PubMed:24880125, PubMed:27628032, PubMed:36586411, PubMed:37390818). 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:<a

href="http://www.uniprot.org/citations/37390818" target="_blank">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-live (PubMed:8662539, PubMed:11082038, PubMed:18644871, PubMed:24880125, PubMed:27628032, PubMed:36586411). Functions by binding target proteins, such as GAPDH, NLRP3 and MLLT11, and targeting them for lysosomal degradation (PubMed:8662539, PubMed:11082038, PubMed:18644871, PubMed:24880125, PubMed:36586411). 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). 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). 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). Required for normal degradation of the contents of autophagosomes (PubMed: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:20518820, PubMed:15894275). Is not required for efficient MHC class II-mediated presentation of endogenous antigens (PubMed: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:7488019, PubMed:26856698). 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:7488019, PubMed:26856698). Isoform LAMP-2C is detected in small intestine, colon, heart, brain, skeletal muscle, and at lower levels in kidney and placenta (PubMed:26856698).

LAMP2 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

LAMP2 Antibody (Center) Blocking Peptide - Images

LAMP2 Antibody (Center) Blocking Peptide - Background

LAMP2 is a member of a family of membrane glycoproteins. This glycoprotein provides selectins with carbohydrate ligands. It may play a role in tumor cell metastasis. It may also function in the protection, maintenance, and adhesion of the lysosome.

LAMP2 Antibody (Center) Blocking Peptide - References

Sarafian,V.S., Acta. Biol. Hung. 57 (3), 315-322 (2006)Liu,T., J. Proteome Res. 4 (6), 2070-2080 (2005)Mane,S.M., Arch. Biochem. Biophys. 268 (1), 360-378 (1989)Fukuda,M., J. Biol. Chem. 263 (35), 18920-18928 (1988)