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CD107b

Purified Mouse Monoclonal Antibody
Catalog # AO2707a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P13473
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Clone Names	8E2F2
Isotype	Mouse IgG2b
Calculated MW	44961
Immunogen	Purified recombinant fragment of human CD107b (AA: extra 29-168) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	3920
Other Names	LAMPB; LAMP2; LAMP-2; LGP-96; LGP110
Dilution	WB~~ 1/500 - 1/2000 IHC~~ 1/200 - 1/1000 ICC~~N/A E~~ 1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD107b is for research use only and not for use in diagnostic or therapeutic procedures.

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:36586411, PubMed:37390818, PubMed: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). 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:11082038, PubMed:18644871, PubMed:24880125, PubMed:27628032, PubMed:36586411, PubMed:8662539). Functions by binding target proteins, such as GAPDH, GPX4, NLRP3 and MLLT11, and targeting them for lysosomal degradation (PubMed:11082038, PubMed:18644871, PubMed:24880125, PubMed:36586411, PubMed: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). 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:15894275, PubMed:20518820). 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

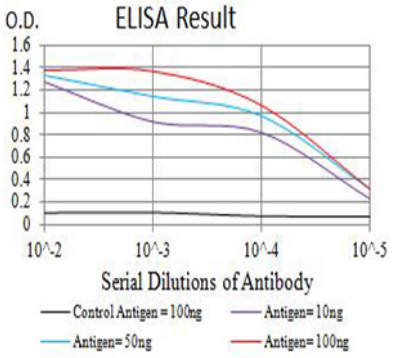
Isoform LAMP-2A is highly expressed in placenta, lung and liver, less in kidney and pancreas, low in brain and skeletal muscle (PubMed:26856698, PubMed:7488019). Isoform LAMP-2B is detected in spleen, thymus, prostate, testis, small intestine, colon, skeletal muscle, brain, placenta, lung, kidney, ovary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

References

1.Mol Cell Biochem. 2014 Jan;385(1-2):1-6. 2.Rheumatology (Oxford). 2013 Sep;52(9):1592-8.

Images

Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



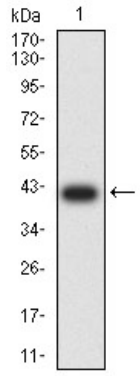


Figure 2:Western blot analysis using CD107b mAb against human CD107b (AA: extra 29-168) recombinant protein. (Expected MW is 41.4 kDa)

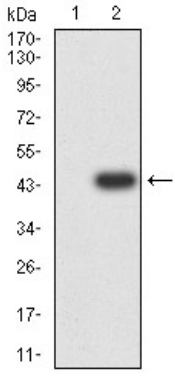


Figure 3:Western blot analysis using CD107b mAb against HEK293 (1) and CD107b (AA: extra 29-168)-hIgGFc transfected HEK293 (2) cell lysate.

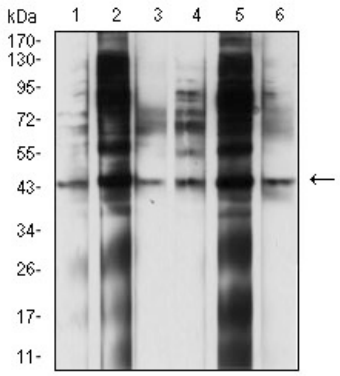
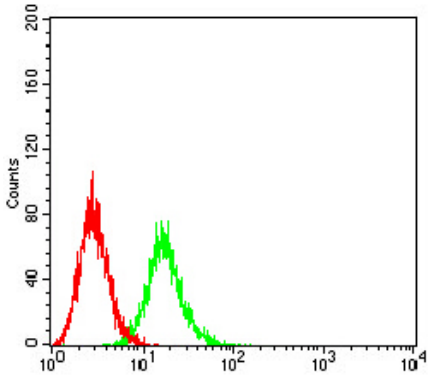


Figure 4:Western blot analysis using CD107b mouse mAb against U937 (1), HepG2 (2), RAW264.7 (3), NIH3T3 (4), C6 (5), and T47D (6) cell lysate.

Figure 5:Flow cytometric analysis of Ramos cells using CD107b mouse mAb (green) and negative control (red).



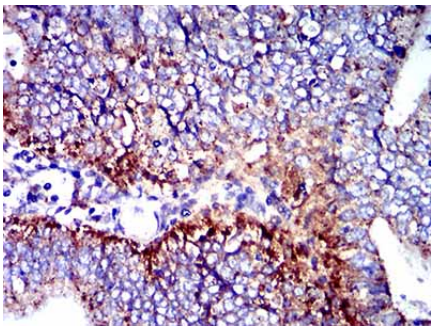


Figure 6:Immunohistochemical analysis of paraffin-embedded endometrial cancer tissues using CD107b mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.