

**KD-Validated Anti-LAMP2 Rabbit Monoclonal Antibody**  
Rabbit monoclonal antibody  
Catalog # AGI2336**Specification****KD-Validated Anti-LAMP2 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	<a href="#">P13473</a>
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 45 kDa ; Observed, 120 kDa
Gene Name	KDa
Aliases	LAMP2
	LAMP2; Lysosomal Associated Membrane Protein 2; Lysosome-Associated Membrane Glycoprotein; CD107 Antigen-Like Family Member B; CD107b; LAMP-2; LGP-96; Lysosomal-Associated Membrane Protein 2; Lysosome-Associated Membrane Protein 2; CD107b Antigen; LGP110; CD107B; LAMPB; DND
Immunogen	A synthesized peptide derived from human LAMP2

**KD-Validated Anti-LAMP2 Rabbit Monoclonal Antibody - Additional Information**

Gene ID	3920
<b>Other Names</b>	
	Lysosome-associated membrane glycoprotein 2, LAMP-2, Lysosome-associated membrane protein 2, CD107 antigen-like family member B, LGP-96, CD107b, LAMP2

**KD-Validated Anti-LAMP2 Rabbit Monoclonal Antibody - Protein Information****Name** LAMP2**Function**

Lysosomal membrane glycoprotein which plays an important role in lysosome biogenesis, lysosomal pH regulation and autophagy (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: [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: [8662539](http://www.uniprot.org/citations/8662539)).

href="http://www.uniprot.org/citations/37390818" target="\_blank">37390818</a>). 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:<a href="http://www.uniprot.org/citations/11082038" target="\_blank">11082038</a>, PubMed:<a href="http://www.uniprot.org/citations/18644871" target="\_blank">18644871</a>, PubMed:<a href="http://www.uniprot.org/citations/24880125" target="\_blank">24880125</a>, PubMed:<a href="http://www.uniprot.org/citations/27628032" target="\_blank">27628032</a>, PubMed:<a href="http://www.uniprot.org/citations/36586411" target="\_blank">36586411</a>, PubMed:<a href="http://www.uniprot.org/citations/8662539" target="\_blank">8662539</a>). Functions by binding target proteins, such as GAPDH, NLRP3 and MLLT11, and targeting them for lysosomal degradation (PubMed:<a href="http://www.uniprot.org/citations/11082038" target="\_blank">11082038</a>, PubMed:<a href="http://www.uniprot.org/citations/18644871" target="\_blank">18644871</a>, PubMed:<a href="http://www.uniprot.org/citations/24880125" target="\_blank">24880125</a>, PubMed:<a href="http://www.uniprot.org/citations/36586411" target="\_blank">36586411</a>, PubMed:<a href="http://www.uniprot.org/citations/8662539" target="\_blank">8662539</a>). 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:<a href="http://www.uniprot.org/citations/36586411" target="\_blank">36586411</a>). Plays a role in lysosomal protein degradation in response to starvation (By similarity). Required for the fusion of autophagosomes with lysosomes during autophagy (PubMed:<a href="http://www.uniprot.org/citations/27628032" target="\_blank">27628032</a>). 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:<a href="http://www.uniprot.org/citations/27628032" target="\_blank">27628032</a>). Required for normal degradation of the contents of autophagosomes (PubMed:<a href="http://www.uniprot.org/citations/27628032" target="\_blank">27628032</a>). 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:<a href="http://www.uniprot.org/citations/15894275" target="\_blank">15894275</a>, PubMed:<a href="http://www.uniprot.org/citations/20518820" target="\_blank">20518820</a>). Is not required for efficient MHC class II-mediated presentation of endogenous antigens (PubMed:<a href="http://www.uniprot.org/citations/20518820" target="\_blank">20518820</a>).

### 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

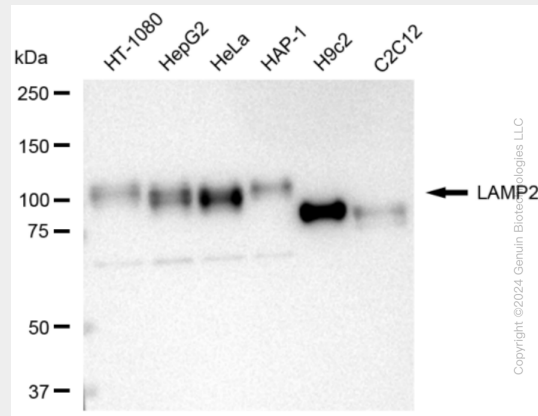
Isoform LAMP-2A is highly expressed in placenta, lung and liver, less in kidney and pancreas, low in brain and skeletal muscle (PubMed:26856698, PubMed:7488019). Isoform LAMP-2B is detected in spleen, thymus, prostate, testis, small intestine, colon, skeletal muscle, brain, placenta, lung, kidney, ovary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

## KD-Validated Anti-LAMP2 Rabbit Monoclonal Antibody - Protocols

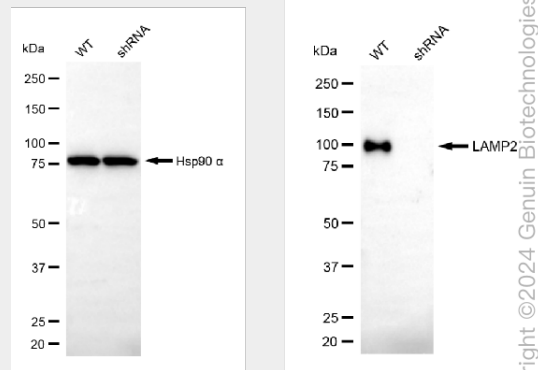
Provided below are standard protocols that you may find useful for product applications.

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

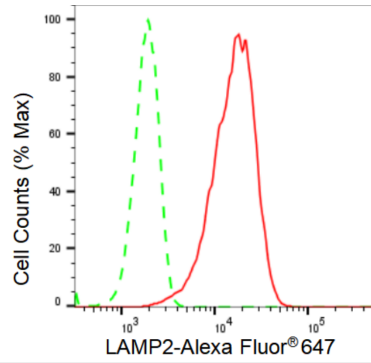
### KD-Validated Anti-LAMP2 Rabbit Monoclonal Antibody - Images



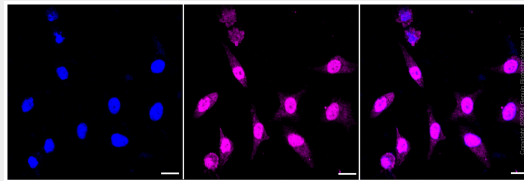
Western blotting analysis using anti-LAMP2 antibody (Cat#68679). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-LAMP2 antibody (Cat#68679, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using FeQ™ ECL Substrate Kit (Cat#226).



Western blotting analysis using anti-LAMP2 antibody (Cat#68679). LAMP2 expression in wild type (WT) and LAMP2 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-LAMP2 antibody (Cat#68679, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using FeQ™ ECL Substrate Kit (Cat#226).



Flow cytometric analysis of LAMP2 expression in HeLa cells using LAMP2 antibody (Cat#68679, 1:2,000). Green, isotype control; red, LAMP2.



Immunocytochemical staining of HeLa cells with LAMP2 antibody (Cat#68679, 1:1,000). Nuclei were stained blue with DAPI; LAMP2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20  $\mu$ m.