10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

# LAMP2 Antibody

## LAMP2 Antibody, Clone GL2A7

## Catalog # ASM10061

## Specification

### LAMP2 Antibody - Product Information

| | |
|---|---|
| Application | ICC/IF, WB |
| Primary Accession | P17047 |
| Other Accession | NP_001017959.1 |
| Host | Rat |
| Isotype | IgG1 |
| Reactivity | Human, Mouse, Rabbit |
| Clonality | Monoclonal |

**Description**
Rat Anti-Mouse LAMP2 Monoclonal IgG1

**Target/Specificity**
Detects ~100-110kDa.

**Other Names**
CD107b Antibody, Igp110 Antibody, Igp2 Antibody, Lamp2C Antibody, LampB Antibody, MAC3 Antibody, Lysosome-associated membrane glycoprotein 2 Antibody, LAMP-2 Antibody, Lysosome-associated membrane protein 2 Antibody, CD107 antigen-like family member B Antibody, Lysosomal membrane glycoprotein type B Antibody, LGP-B Antibody

**Immunogen**
Purified preparation of mouse liver lysosomal membranes

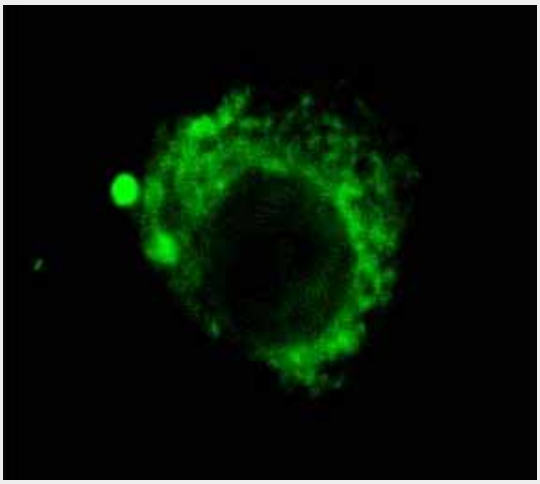
**Purification**
Protein G Purified

| | |
|---|---|
| Storage | -20ºC |

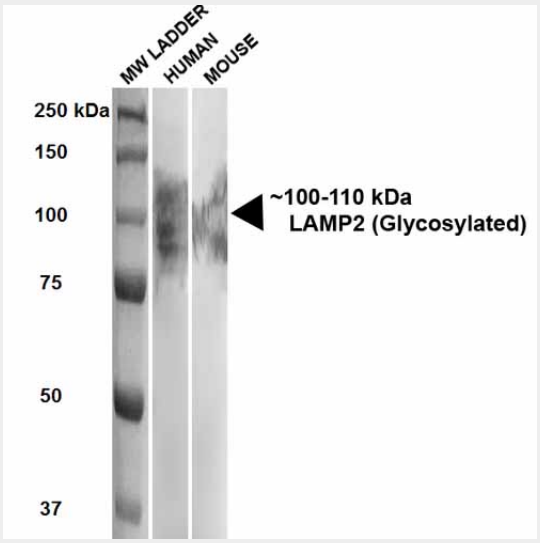
**Storage Buffer**
PBS pH7.4, 50% glycerol, 0.09% sodium azide

| | |
|---|---|
| Shipping Temperature | Blue Ice or 4ºC |

**Certificate of Analysis**
1 µg/ml of SMC-141 was sufficient for detection of LAMP2 in 20 µg of rat liver microsomes by ECL immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.



Immunocytochemistry/Immunofluorescence analysis using Rat Anti-LAMP2 Monoclonal Antibody, Clone GL2A7 (ASM10061). Tissue: Corneal Endothelial Cell (CEC). Species: Rabbit. Primary Antibody: Rat Anti-LAMP2 Monoclonal Antibody (ASM10061) at 1:1000. Secondary Antibody: FITC Goat Anti-Rat (green). Courtesy of: Eunduck E.P. Kay, Doheny Eye Institute.




Western Blot analysis of Human, Mouse HEK293 and 3T3NIH cell lysates showing detection of ~100-110 kDa LAMP2 protein using Rat Anti-LAMP2 Monoclonal Antibody,

**Cellular Localization**
Cell Membrane | Endosome | Lysosome | Endosome membrane | Lysosome membrane

## LAMP2 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 Cytomety
- Cell Culture

Clone GL2A7 (ASM10061). Lane 1: MW ladder. Lane 2: Human HEK293 lysate (20 µg). Lane 3: Mouse 3T3NIH lysate (10 µg). Block: 5% milk + TBST for 1 hour at RT. Primary Antibody: Rat Anti-LAMP2 Monoclonal Antibody (ASM10061) at 1:500 for 1 hour at RT. Secondary Antibody: HRP Goat Anti-Rat at 1:100 for 1 hour at RT. Color Development: TMB solution for 5 min at RT. Predicted/Observed Size: ~100-110 kDa.

## LAMP2 Antibody - Background

Lysosme associated membrane proteins, or LAMP1 and LAMP2, are major constituents of the lysosomal membrane. The two have closely related structures, with 37% sequence homology (2). They are both transmembrane glycoproteins that are localized primarily in lysosomes and late endosomes. Newly synthesized molecules are mostly transported from the trans-Golgi network directly to endosomes and then to lysosomes. A second pathway involves the lamps being delivered from the Golgi to the cell surface, and then along the endocytic pathway to the lysosomes. A minor pathway involves transport via the plasma membrane (3).
LAMP2 has also been detected at the plasma membrane of cells, as well as in cells that secrete lysosomal hydrolases. A study in the developmental expresses patterns of membrane LAMP2 transcripts indicate a possible involvement of this protein in cell-cell or cell-extracellular matrix interaction, and appear to reflect tissue and cell type specific roles of lysosomes during morphogenesis (4). Upon stimulation, a rapid translocation of intracellular LAMPs to the cell membrane is dependent on a carboxyl-terminal tyrosine based motif (YXXI) (5). This stimulation has also been shown to have an associated release of histamine, leukotriene C4 and prostaglandin D2, which shows that LAMP1 and LAMP2 are activation markers for normal mast cells (5). They have also been linked to the inflammatory response in that they promote adhesion of human peripheral blood mononuclear cells (PBMC) to vascular endothelium, and therefore possibly the adhesion of PBMC to the site of inflammation (6). LAMP2 has also been shown to be critical for autophagy, in conversion of early autophagic vacuoles to vacuoles which rapidly

degrade their content (7).

## LAMP2 Antibody - References

1. Granger B.L., et al. (1990) J. Biol. Chem. 265: 12036-12043.
2. Furuta K., et al. (1999) EMBO J. 17(5):1304-14.
3. Rohrer J., et al. (1996) J Cell Biol. 132(4): 565-76.
4. Lichter-Konecki U., et al (1999) Differentiation 65(1): 43-58.
5. Grutzkau A., et al. (2004) Cytometry A. 61(1): 62-68.
6. Kannan K., et al. (1996) Cell Immunol. 171: 10-19.
7. Tanaka Y., et al. (2000) Nature 406: 902-906.