Rat LAMP2 Monoclonal Antibody | anti-Lamp2 antibody

LAMP2 Antibody: ATTO 594

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA103459	**Rat**	**Mouse, Rabbit**	**Immunofluorescence, Immunocytochemistry, Immunoprecipitation**

PRODUCT SYNONYMS

LAMP2; Monoclonal Antibody; LAMP2 Antibody: ATTO 594; CD107b; Igp110; Igp2; Lamp2C; LampB; MAC3; Lysosome-associated membrane glycoprotein 2; LAMP-2; Lysosome-associated membrane protein 2; CD107 antigen-like family member B; Lysosomal membrane glycoprotein type B; LGP-B; anti-Lamp2 antibody

PRODUCT SPECIFICATIONS

Host	Rat
Reactivity	Mouse, Rabbit
Clonality	Monoclonal
Isotype	IgG1
Clone Number	GL2A7
Form/Format	Protein G Purified
Concentration	1mg/mL (varies by lot)
Sequence Length	415
Applicable Applications for anti-Lamp2 antibody	IF (Immunofluorescence), ICC (Immunocytochemistry), IP (Immunoprecipitation)
Conjugate	ATTO 594
Storage Buffer	PBS pH7.4, 50% glycerol, 0.09% sodium azide
Preparation and Storage	-20 degree C

IMAGES

WB (Western Blot)
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, Clone GL2A7. Lane 1: MW ladder. Lane 2: Human HEK293 lysate (20 ug). Lane 3: Mouse 3T3NIH lysate (10 ug). Block: 5% milk + TBST for 1 hour at RT. Primary Antibody: Rat Anti-LAMP2 Monoclonal Antibody 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.

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

ADDITIONAL INFORMATION

Related Product Information for anti-Lamp2 antibody	**Background Info:** Recommended for use in ICC. The antibody will label the presumptive lysosomes and late endosomes in cells that have been permeabilized with saponin. **Scientific 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 C 9$) and prostaglandin D 9@), 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).
Product Categories/Family for anti-Lamp2 antibody	Chaperones; Organelle Markers; Trafficking
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.

NCBI AND UNIPROT INFORMATION

NCBI GI #	63054837
NCBI GeneID	16784
NCBI Accession #	NP_001017959.1
NCBI GenBank Nucleotide #	NM_001017959.2
UniProt Accession #	P17047; Q3TXG5; Q8BSG8; A2A430
Molecular Weight	45,655 Da
NCBI Official Full Name	lysosome-associated membrane glycoprotein 2 isoform 1
NCBI Official Synonym Full Names	lysosomal-associated membrane protein 2
NCBI Official Symbol	Lamp2
NCBI Official Synonym Symbols	Mac3; LGP-B; CD107b; Lamp-2; Lamp II; Lamp-2a; Lamp-2b; Lamp-2c
NCBI Protein Information	lysosome-associated membrane glycoprotein 2; lysosomal membrane glycoprotein 2; CD107 antigen-like family member B; lysosomal membrane glycoprotein type B
UniProt Protein Name	Lysosome-associated membrane glycoprotein 2
UniProt Gene Name	**Lamp2**
UniProt Synonym Gene Names	Lamp-2; LAMP-2; Lysosome-associated membrane protein 2; LGP-B
UniProt Entry Name	LAMP2_MOUSE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.