Datasheet for ABIN361746

anti-LAMP2 antibody

2 Images

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Overview

Quantity:	100 µg
Target:	LAMP2
Reactivity:	Mouse
Host:	Rat
Clonality:	Monoclonal
Conjugate:	This LAMP2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Immunocytochemistry (ICC), Immunofluorescence (IF)

Product Details

Immunogen:	Purified preparation of mouse liver lysosomal membranes
Clone:	GL2A7
Isotype:	IgG1
Specificity:	Detects ~100-110 kDa.
Cross-Reactivity:	Human, Mouse, Rabbit
Purification:	Protein G Purified

Target Details

Target:	LAMP2
Alternative Name:	LAMP2 (LAMP2 Products)

Target Details

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).
Gene ID:	16784
NCBI Accession:	NP_001017959
UniProt:	P17047
Pathways:	Autophagy

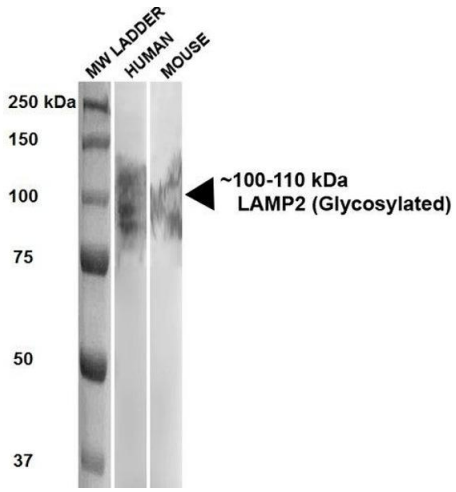
Application Details

Application Notes:	• WB (1:1000) • ICC/IF (1:500) • optimal dilutions for assays should be determined by the user.
Comment:	1 µg/ml of ABIN361745 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.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

Images



Western Blotting

Image 1. 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 (ABIN361745 and ABIN361746). 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 (ABIN361745 and ABIN361746) 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.

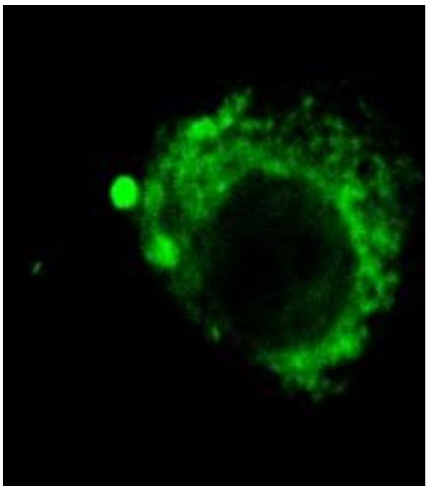


Image 2. LAMP2 (GL2A7), IF showing distribution of lysosomes in CEC Courtesy of Eunduck E P Kay, Doheny Eye Institue.