abcam

ab237307

Alexa Fluor® 647 Anti-LAMP1/CD107a antibody [EPR21026] - Lysosome Marker

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR21026
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	This product gave a positive signal in NIH/3T3 fixed with 100% methanol (5 min).

Flow Cyt (Intra)

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information LAMP1/CD107a

Function Lysosomal membrane glycoprotein which plays an important role in lysosome biogenesis, lysosomal pH regulation, autophagy and cholesterol homeostasis (PubMed:15121881). 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 (By similarity). Also plays an important role in NK-cells cytotoxicity (PubMed:23847195). Mechanistically, participates in cytotoxic granule movement to the cell surface and perforin trafficking to the lytic granule (By similarity). In addition, protects NK-cells from degranulation-associated damage induced by their own cytotoxic granule content (PubMed:23847195). Presents carbohydrate ligands to selectins (By similarity). Also implicated in tumor cell metastasis (PubMed:2676155).

Storage

Shipped at conditions Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Stable for 12 months at -20°C, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	LAMP1 also known as lysosome-associated membrane glycoprotein 1 is an important player within cellular mechanics. It exhibits a molecular weight of approximately 120 kDa. This protein exists abundantly in lysosomal membranes

	and sometimes in endosomes. LAMP1 operates near most cell types and has a significant presence in immune neuronal and epithelial cells. By maintaining the lysosomal membrane's integrity LAMP1 contributes to cellular homeostasis.
Biological function summary	LAMP1 functions to protect lysosomal membranes from the harsh environment inside the lysosome. It forms part of a protective glycocalyx composed of highly glycosylated proteins supporting lysosomal stability. This protein interacts closely with other lysosome markers and assists in the fusion of vesicles with lysosomes making it fundamental to lysosomal processes. As a lysosome marker LAMP1 helps identify lysosomal compartments during studies involving microscopy and LAMP1 staining.
Pathways	The protein LAMP1 participates in the autophagy and endocytic pathways. It acts collaboratively within the lysosomal degradation route involving proteins like LAMP2 which also supports lysosomal function. LAMP1 influences these pathways by mediating the fusion of autophagosomes or endosomes with lysosomes thereby ensuring efficient breakdown of cellular debris and macromolecules.
Associated diseases and disorders	LAMP1 associates with lysosomal storage disorders and neurodegenerative diseases. The abnormal function or expression of LAMP1 has been linked to conditions such as Niemann-Pick disease and Alzheimer's disease. In these contexts its interaction with proteins like APP (amyloid precursor protein) illustrates its involvement in pathogenic pathways that lead to cellular dysfunction and disease progression. Understanding LAMP1's role may enhance diagnostic and therapeutic approaches pertaining to these disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

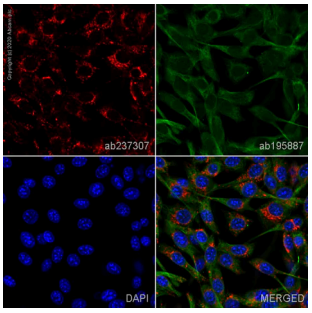
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
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1 product image



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-LAMP1/CD107a antibody [EPR21026] - Lysosome Marker (ab237307)

LAMP1/CD107a Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-LAMP1/CD107a antibody

ab237307 staining LAMP1 in NIH/3T3 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab237307 at 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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