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Product Information

Anti-LAMP1-Cy3™
produced in rabbit, affinity isolated antibody

Product Number **L0419**

Product Description

Anti-LAMP1 is produced in rabbit using as immunogen a synthetic peptide corresponding to a fragment of human LAMP1 (GeneID 3916) conjugated to KLH. The corresponding sequence is identical in rat and mouse. Anti-LAMP1-Cy3™ conjugate is prepared by conjugation of the affinity purified antibody to Cy3 and the conjugate is purified by gel filtration to remove unbound Cy3 fluorophore.

Anti-LAMP1-Cy3 conjugate recognizes human, mouse, and rat LAMP1. Applications include the detection and localization of LAMP1 by direct immunofluorescence.

Lysosomal-associated membrane protein 1 (LAMP1), also termed LGP120, is a heavily glycosylated lysosomal membrane protein with a molecular mass of ~120 kDa. It consists of a ~40 kDa core polypeptide with O-linked and 18 asparagine-linked oligosaccharide side chains. Some of the N-glycans are very complex poly-N-acetyllactosamines. This heavy glycosylation of LAMP1 may be important to protect the lysosomal membrane from proteolytic enzymes within lysosomes.[1,2] LAMP1 protein contains a leader sequence, a large intralumenal region consisting of 2 homologous domains separated by a hinge region rich in proline and serine, a 24-amino acid transmembrane region, and a short cytoplasmic tail containing the lysosomal membrane targeting signal.

Each homologous domain of the intralumenal region contains 4 cysteine residues that form 2 disulfide bonds.[3-5] LAMP1 is ubiquitously expressed and highly conserved. It localizes mainly to lysosomes, although a small portion is detected on the cell surface. It was found that highly metastatic tumor cells express more LAMP molecules on the cell surface than poorly metastatic cells.[3] Anti-LAMP1 may be used as a lysosomal marker.

Reagent

Supplied as a solution in 0.01 M PBS, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: 1.0–2.0 mg/mL
Molar Ratio (F/P): 3–9

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C. Working dilutions should be discarded if not used within 12 hours. Store the product protected from light.

Product Profile

Immunofluorescence: a working concentration of 1.0–2.0 μg/mL is recommended using human HeLa cells, rat NRK cells, and mouse 3T3 cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Chen, J.W. et al., *J. Biol. Chem*., **263**, 8754-8758 (1988).
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3. Fukuda, M., *J. Biol. Chem*., **266**, 21327-21330 (1991).
4. Conesa, M. et al., *Biochem. J*., **370**, 703-711 (2003).
5. Rohrer, J. et. al., *J. Cell Biol*., **132**, 565-576 (1996).

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