

## REAGENTS PROVIDED

**NorthernLights™ 557 (NL557)-conjugated mouse monoclonal anti-Human LAMP1/CD107a.** Supplied as a 10X solution of antibody in 0.5 mL PBS containing 0.09% sodium azide.

**Clone #:** 508921

**Isotype:** Mouse IgG<sub>2b</sub>

## STORAGE

Reagents are stable for **twelve months** from date of receipt when stored in the dark at 2-8 °C.

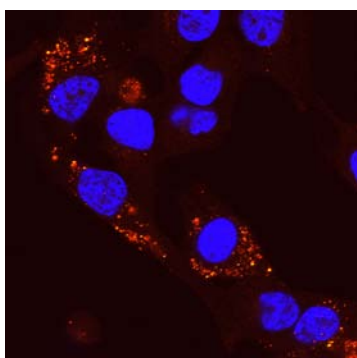
## INTENDED USE

Designed to visualize the expression of human LAMP1 by fluorescence microscopy for staining cells and tissues. Conjugated LAMP1 antibodies are ideal for immunocytochemistry colocalization studies in lysosomes.

## PRODUCT DESCRIPTION

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified NS0-derived recombinant human LAMP1 (Ala28-Asn380; Accession # P11279). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The antibody was then conjugated to fluorochrome NL557. The spectral characteristics of NL557 are provided, along with those of Rhodamine Red™-X (RRX) and Cy™3 for comparison.

Fluorochrome	Absorption Maximum (nm)	Emission Maximum (nm)
NL557	557	574
RRX	570	590
Cy3	548	562



## Mouse anti-Human LAMP1/CD107a

Immunofluorescent detection of LAMP1 (red color) in fixed HeLa cells. Labeling is confined to lysosomes. Nuclei were labeled with DAPI (blue color).

## BACKGROUND INFORMATION

Lysosome associated membrane protein 1 (LAMP1), also known as CD107a, is a 100-130 kDa member of the LAMP family of glycoproteins. It is expressed in lysosomal and plasma membranes of macrophages, NK and T-cells, and with LAMP2, is essential for the formation of phagolysosomes. On the cell surface, it also presents carbohydrates to selectins. Mature human LAMP1 is a 389 amino acid (aa) type I transmembrane glycoprotein. It contains a 354 aa luminal/extracellular domain (ECD) (aa 28-381) and a 12 aa cytoplasmic tail (aa 405-416). The ECD has two large looping regions (aa 28-193 and 227-381) plus multiple N- and O-linked glycosylation sites. There is one potential splice variant that shows a 26 aa substitution in the signal sequence. Over aa 28-380, human LAMP1 shares 64% aa identity with mouse LAMP1.

## FLUORESCENT STAINING VALIDATION

This antibody has been tested for immunofluorescent detection of LAMP1 in HeLa cells fixed in 2% formaldehyde. Cells were incubated with mouse anti-human LAMP1 antibody conjugated to NL557 at a final concentration of 1X (1:10 dilution) overnight at 4 °C. After washing with PBS, cells were counterstained with DAPI to label cell nuclei. If a staining volume of 250 µL is used, this vial can be used for 20 tests; 100 tests can be done in a staining volume of 50 µL.

**Warning:** Contains sodium azide as a preservative. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.

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*Rhodamine Red is a trademark of Invitrogen, Inc.*

*Cy is a trademark of GE Healthcare.*

*Triton is a registered trademark of Union Carbide Corp.*