

Anti-Human LAMP1/CD107a-NL557

Catalog Number: NL4800R

Lot Number: ADNA01

100 Tests in 50 μ L staining volume

20 Tests in 250 μ L staining volume

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_{2B}

STORAGE

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

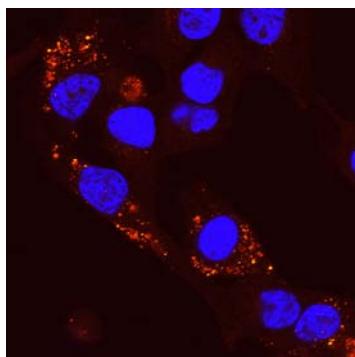
INTENDED USE

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 μ L is used, this vial can be used for 20 tests; 100 tests can be done in a staining volume of 50 μ L.

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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