ARG23384
anti-CD107b / LAMP2 antibody [AC17] (FITC)

Package: 50 µg
Store at: 4°C

Summary

Product Description	FITC-conjugated Mouse Monoclonal antibody [AC17] recognizes CD107b / LAMP2 Mouse anti Dog CD107b antibody, clone AC17 is a monoclonal antibody specific for canine CD107b, otherwise known as lysosome-associated membrane protein 2 or LAMP-2. Immunofluorescence staining of MDCK cells with mouse anti dog CD107b demonstrates staining patterns consistent with localization to lysozomes. This is supported by coincident staining of an exogenous lysozomal glycoprotein, avian LEP100 transfected into MDCK cells and detected using the anti LEP100 antibody clone CV24 (Nabi et al.1991).Clone AC17 immunoprecipitates a protein of ~95 kDa in MDCK cells which, following Endo F digestion to remove N-linked oligosaccharides, yields a core protein product of 40 kDa, indicating the heavily glycosylated nature of CD107b. The molecular weight of canine CD107b is typical of many lysozome-associated membrane proteins. While most (97%) CD107b resides in the lysozomal environment in adherent MDCK cells in vitro, early studies (Nabi et al.1991) indicate that a small percentage of total cellular CD107b, as revealed by radioimmune assay with clone AC17, is found associated with the cell membrane. Lysosomes are membrane-bound organelles found within the cytoplasm of most cells, they contain hydrolytic enzymes and act as the major compartment for heterophagic and autophagic digestion. Members of the lysosomal-associated membrane protein family (LAMPS) are believed to play an important role in protecting the lysosomal membrane from protease degradation and are involved in lectin-mediated cell adhesion. CD107b has been shown to share high N-terminal amino acid sequence homology with human, mouse and rat CD107b (Nabi et al.1993). Transfection of a mink type II lung epithelial cell line with beta1-6-N-acetylglucosaminyl transferase V demonstrates the formation of large lysozomal vacuoles, termed multilamellar bodies (MLBs), having a very distinct phenotype with expression of CD107b, as indicated by immunofluorescent staining with clone AC17. These MLBs require lysozomal degradation via an autophagic pathway for their formation and may have implications for lysozomal storage diseases (Hariri et al.2000). Evidence shows that CD107b is involved in the lysosomal uptake of cytosolic proteins and the endocytic pathway. Human studies have revealed a correlation between the level of surface expression of CD107b on tumor cells and their metastatic potential (Saitoh et al. 1992).Clone AC17 has been shown as suitable for use in electron microscopy (Nabi et al.1991).
Tested Reactivity	Hu, Dog
Species Does Not React With	Ms, Rat
Tested Application	FACS
Host	Mouse
Clonality	Monoclonal
Clone	AC17
Isotype	IgG1
Target Name	CD107b / LAMP2
Species	Dog
Immunogen	MDCK (Madin-Darby Canine Kidney) cells
Conjugation	FITC
Alternate Names	CD antigen CD107b; LAMPB; CD107b; LGP110; Lysosome-associated membrane glycoprotein 2; LAMP-2; CD107 antigen-like family member B; Lysosome-associated membrane protein 2

Application Instructions

Application table

Application	Dilution
FACS	Neat

Application Note

FACS: Membrane permeabilisation is required for this application. Use 10 µl of the suggested working dilution to label 10^6 cells in 100 µl.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS, 0.09% Sodium azide and 1% BSA.
Preservative	0.09% Sodium azide
Stabilizer	1% BSA
Concentration	0.1 mg/ml
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	LAMP2
Gene Full Name	lysosomal-associated membrane protein 2
Background	The protein encoded by this gene is a member of a family of membrane glycoproteins. This glycoprotein provides selectins with carbohydrate ligands. It may play a role in tumor cell metastasis. It may also function in the protection, maintenance, and adhesion of the lysosome. Alternative splicing of this gene results in multiple transcript variants encoding distinct proteins. [provided by RefSeq, Jul 2008]
Function	Implicated in tumor cell metastasis. May function in protection of the lysosomal membrane from autodigestion, maintenance of the acidic environment of the lysosome, adhesion when expressed on the cell surface (plasma membrane), and inter- and intracellular signal transduction. Protects cells from the toxic effects of methylating mutagens. [UniProt]
Calculated Mw	45 kDa
PTM	O- and N-glycosylated; some of the 16 N-linked glycans are polylactosaminoglycans. [UniProt]