

# CD63 (AHN16.1/46-4-5): sc-66166

## BACKGROUND

The tetraspanins are integral membrane proteins expressed on cell surface and granular membranes of hematopoietic cells and are components of multi-molecular complexes with specific integrins. The tetraspanin CD63 (also known as LAMP-3, melanoma-associated antigen ME491, TSPAN30, MLA1 and OMA81H) is a lysosomal membrane glycoprotein that translocates to the plasma membrane after platelet activation. CD63 is expressed on activated platelets, monocytes and macrophages, and is weakly expressed on granulocytes, T cell and B cells. It is located on the basophilic granule membranes and on the plasma membranes of lymphocytes and granulocytes. CD63 is a member of the TM4 superfamily of leukocyte glycoproteins that includes CD9, CD37 and CD53, which contain four transmembrane regions. CD63 may play a role in phagocytic and intracellular lysosome-phagosome fusion events. CD63 deficiency is associated with Hermansky-Pudlak syndrome.

## REFERENCES

1. Azorsa, D.O., et al. 1991. CD63/Pltgp40: a platelet activation antigen identical to the stage-specific, melanoma-associated antigen ME491. *Blood* 78: 280-284.
2. Horejsi, V., et al. 1991. Novel structurally distinct family of leucocyte surface glycoproteins including CD9, CD37, CD53 and CD63. *FEBS Lett.* 288: 1-4.
3. Nishikata, H., et al. 1992. The rat mast cell antigen AD1 (homologue to human CD63 or melanoma antigen ME491) is expressed in other cells in culture. *J. Immunol.* 149: 862-870.
4. Rous, B.A., et al. 2002. Role of adaptor complex AP-3 in targeting wild-type and mutated CD63 to lysosomes. *Mol. Biol. Cell* 13: 1071-1082.
5. von Lindern, J.J., et al. 2003. Potential role for CD63 in CCR5-mediated human immunodeficiency virus type 1 infection of macrophages. *J. Virol.* 77: 3624-3633.
6. Duffield, A., et al. 2003. The tetraspanin CD63 enhances the internalization of the H/K-ATPase  $\beta$  subunit. *Proc. Natl. Acad. Sci. USA* 100: 15560-15565.
7. Pfistershammer, K., et al. 2004. CD63 as an activation-linked T cell co-stimulatory element. *J. Immunol.* 173: 6000-6008.
8. Lee, M., et al. 2005. Peptide YY and neuropeptide Y induce Villin expression, reduce adhesion, and enhance migration in small intestinal cells through the regulation of CD63, matrix metalloproteinase-3, and Cdc42 activity. *J. Biol. Chem.* 280: 125-136.

## CHROMOSOMAL LOCATION

Genetic locus: CD63 (human) mapping to 12q13.2.

## SOURCE

CD63 (AHN16.1/46-4-5) is a mouse monoclonal antibody raised against eosinophils of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD63 (AHN16.1/46-4-5) is available conjugated either phycoerythrin (sc-66166 PE, 100 tests in 2 ml) or fluorescein (sc-66166 FITC, 100 tests in 2 ml), for IF, IHC(P) and FCM.

## APPLICATIONS

CD63 (AHN16.1/46-4-5) is recommended for detection of CD63 of human origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD63 siRNA (h): sc-29391, CD63 shRNA Plasmid (h): sc-29391-SH and CD63 shRNA (h) Lentiviral Particles: sc-29391-V.

Molecular Weight of CD63 core protein: 26 kDa.

Molecular Weight of glycosylated CD63: 30-60 kDa.

## SELECT PRODUCT CITATIONS

1. da Silveira, J.C., et al. 2012. Cell-secreted vesicles in equine ovarian follicular fluid contain miRNAs and proteins: a possible new form of cell communication within the ovarian follicle. *Biol. Reprod.* 86: 71.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



See **CD63 (MX-49.129.5): sc-5275** for CD63 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.