

# CD63 (M-13): sc-31214



The Power to Question

## 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 hermannsky-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 leukocyte 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.

## CHROMOSOMAL LOCATION

Genetic locus: CD63 (human) mapping to 12q13.2; Cd63 (mouse) mapping to 10 D3.

## SOURCE

CD63 (M-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of CD63 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31214 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

CD63 (M-13) is recommended for detection of CD63 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CD63 (M-13) is also recommended for detection of CD63 in additional species, including bovine and porcine.

Suitable for use as control antibody for CD63 siRNA (h): sc-29391, CD63 siRNA (m): sc-35792, CD63 shRNA Plasmid (h): sc-29391-SH, CD63 shRNA Plasmid (m): sc-35792-SH, CD63 shRNA (h) Lentiviral Particles: sc-29391-V and CD63 shRNA (m) Lentiviral Particles: sc-35792-V.

Molecular Weight of CD63 core protein: 26 kDa.

Molecular Weight of glycosylated CD63: 30-60 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263, T24 cell lysate: sc-2292 or SK-MEL-28 cell lysate: sc-2236.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Bianco, F., et al. 2009. Acid sphingomyelinase activity triggers microparticle release from glial cells. *EMBO J.* 28: 1043-1054.
2. Lv, Z., et al. 2014. Argonaute 2 in cell-secreted microvesicles guides the function of secreted miRNAs in recipient cells. *PLoS ONE* 9: e103599.

## STORAGE

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

## PROTOCOLS

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



Try **CD63 (MX-49.129.5): sc-5275** or **CD63 (NK1/C3): sc-59286**, our highly recommended monoclonal alternatives to CD63 (M-13). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CD63 (MX-49.129.5): sc-5275**.