CD63 (3H1626): sc-71493

SANTA CRUZ® BIOTECHNOLOGY

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 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 β subunit. Proc. Natl. Acad. Sci. USA 100: 15560-15565.

CHROMOSOMAL LOCATION

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

SOURCE

CD63 (3H1626) is a mouse monoclonal antibody raised against T cell line HPB-ALL of human origin.

PRODUCT

Each vial contains 100 µg IgG$_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as fluorescein conjugate for flow cytometry, sc-71493 FITC, 100 tests.

STORAGE

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

APPLICATIONS

CD63 (3H1626) is recommended for detection of CD63 of human origin by Western Blotting (non-reducing) (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).
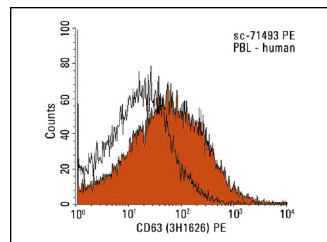
Suitable for use as control antibody for CD63 siRNA (h): sc-29391, CD63 shRNA Plasmid (h): sc-29391-SH and CD63 shRNA (h) Lentiviral Particles: sc-29391-V.

Molecular Weight of CD63 core protein: 26 kDa.

Molecular Weight of glycosylated CD63: 30-60 kDa.

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

DATA

CD63 (3H1626): sc-71493. Indirect FCM analysis of human peripheral blood leukocytes stained with LAMP-3 (MEM-259), followed by PE-conjugated goat anti-mouse IgG$_1$: sc-3764. Black line histogram represents the isotype control, normal mouse IgG$_1$: sc-3877.

SELECT PRODUCT CITATIONS

1. Harris, J., et al. 2008. Tumor necrosis factor blockers influence macrophage responses to *Mycobacterium tuberculosis.* J. Infect. Dis. 198: 1842-1850.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

CONJUGATES

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