SANTA CRUZ BIOTECHNOLOGY, INC.

CD63 (NK1/C3): sc-59286

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.

CHROMOSOMAL LOCATION

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

SOURCE

CD63 (NK1/C3) is a mouse monoclonal antibody raised against CD63 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD63 (NK1/C3) is available conjugated to agarose (sc-59286 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59286 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59286 PE), fluorescein (sc-59286 FITC), Alexa Fluor® 488 (sc-59286 AF488), Alexa Fluor® 546 (sc-59286 AF546), Alexa Fluor® 594 (sc-59286 AF594) or Alexa Fluor® 647 (sc-59286 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-59286 AF680) or Alexa Fluor® 790 (sc-59286 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD63 (NK1/C3) is recommended for detection of CD63 expressed on activated platelets, granulocytes, B cells and T cells of human origin by Western Blotting (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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

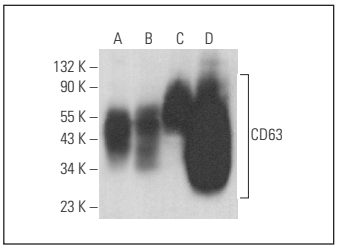
Molecular Weight of glycosylated CD63: 30-60 kDa.

Positive Controls: RT-4 whole cell lysate: sc-364257, THP-1 cell lysate: sc-2238 or A-375 cell lysate: sc-3811.

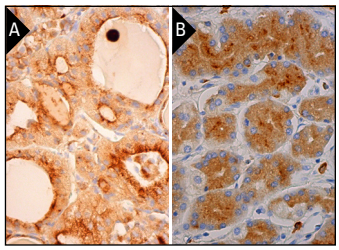
STORAGE

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

DATA



CD63 (NK1/C3): sc-59286. Western blot analysis of CD63 expression in MES-SA/Dx5 (**A**), RT-4 (**B**), THP-1 (**C**) and A-375 (**D**) whole cell lysates.



CD63 (NK1/C3): sc-59286. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic and membrane staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Li, P., et al. 2010. Granzyme B is recovered by natural killer cells via clathrin-dependent endocytosis. Cell. Mol. Life Sci. 67: 3197-3208.
2. Giusti, I., et al. 2015. Time-dependent release of extracellular vesicle subpopulations in tumor CABA I cells. Oncol. Rep. 34: 2752-2759.
3. Chin, A.R., et al. 2018. Polarized secretion of extracellular vesicles by mammary epithelia. J. Mammary Gland Biol. Neoplasia 23: 165-176.
4. Tran, P.H.L., et al. 2019. Development of a nanoamorphous exosomal delivery system as an effective biological platform for improved encapsulation of hydrophobic drugs. Int. J. Pharm. 566: 697-707.
5. Saxena, A., et al. 2021. Extracellular vesicles from human airway basal cells respond to cigarette smoke extract and affect vascular endothelial cells. Sci. Rep. 11: 6104.
6. Cho, S., et al. 2021. Multifluorescence single extracellular vesicle analysis by time-sequential illumination and tracking. ACS Nano. E-published.
7. Awoyemi, T., et al. 2022. Neuropilin-1 is uniquely expressed on small syncytiotrophoblast extracellular vesicles but not on medium/large vesicles from preeclampsia and normal placentae. Biochem. Biophys. Res. Commun. 619: 151-158.
8. Giusti, I., et al. 2022. Cancer three-dimensional spheroids mimic *in vivo* tumor features, displaying "inner" extracellular vesicles and vasculogenic mimicry. Int. J. Mol. Sci. 23: 11782.

RESEARCH USE

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

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