SANTA CRUZ BIOTECHNOLOGY, INC.

CD55 (143-30): sc-21769

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD55, also called decay accelerating factor (DAF), is a GPI-anchored single chain glycoprotein. CD55 may play a role in protecting cells from complement-mediated lysis by preventing the amplification steps of the complement cascade. CD55 functions to prevent the assembly of C3 convertase or to accelerate the disassembly of preformed convertase, which blocks formation of the membrane attack complex. CD55 is expressed on cells in contact with serum, including hematopoietic and many non-hematopoietic cells.

REFERENCES

1. Nicholson-Weller, A., et al. 1994. Structure and function of decay accelerating factor CD55. J. Lab. Clin. Med. 123: 485-491.
2. Seya, T., et al. 1994. Distribution of C3-step regulatory proteins of the complement system, CD35 (CR1), CD46 (MCP), and CD55 (DAF) in hematological malignancies. Leuk. Lymphoma 12: 395-400.
3. Bjorge, L., et al. 1996. Characterisation of the complement-regulatory proteins decay-accelerating factor (DAF, CD55) and membrane cofactor protein (MCP, CD46) on a human colonic adenocarcinoma cell line. Cancer Immunol. Immunother. 42: 185-192.
4. Spiller, O.B., et al. 1996. Complement expression on astrocytes and astrocytoma cell lines: failure of complement regulation at the C3 level correlates with very low CD55 expression. J. Neuroimmunol. 71: 97-106.
5. van Denderen, B.J., et al. 1996. Expression of functional decay-accelerating factor (CD55) in transgenic mice protects against human complement-mediated attack. Transplantation 61: 582-588.
6. Liszewski, M.K., et al. 1996. Control of the complement system. Adv. Immunol. 61: 201-283.

CHROMOSOMAL LOCATION

Genetic locus: CD55 (human) mapping to 1q32.2; Cd55 (mouse) mapping to 1 E4.

SOURCE

CD55 (143-30) is a mouse monoclonal antibody raised against PHA stimulated human PBL.

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.

CD55 (143-30) is available conjugated to either phycoerythrin (sc-21769 PE) or fluorescein (sc-21769 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

CD55 (143-30) is recommended for detection of CD55 of mouse, rat and 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD55 siRNA (h): sc-35012, CD55 siRNA (m): sc-35013, CD55 shRNA Plasmid (h): sc-35012-SH, CD55 shRNA Plasmid (m): sc-35013-SH, CD55 shRNA (h) Lentiviral Particles: sc-35012-V and CD55 shRNA (m) Lentiviral Particles: sc-35013-V.

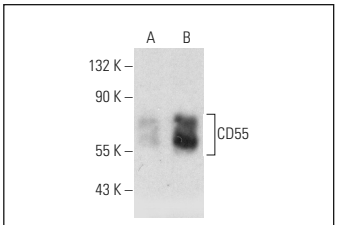
Molecular Weight of CD55: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, CD55 (m): 293T Lysate: sc-119111 or AML-193 whole cell lysate: sc-364182.

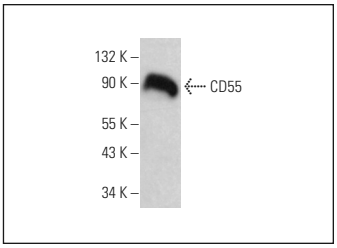
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CD55 (143-30): sc-21769. Western blot analysis of CD55 expression in non-transfected: sc-117752 (**A**) and mouse CD55 transfected: sc-119111 (**B**) 293T whole cell lysates.



CD55 (143-30): sc-21769. Western blot analysis of CD55 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Mukherjee, S., et al. 2020. Alcohol increases exosome release from microglia to promote complement C1q induced cellular death of proopiomelanocortin neurons in the hypothalamus in a rat model of fetal alcohol spectrum disorders. J. Neurosci. E-published.

CONJUGATES

See **CD55 (NaM16-4D3): sc-51733** for CD55 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.