

CD55 (BRIC 216): sc-59092

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. 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.
2. Nicholson-Weller, A. and Wang, C.E. 1994. Structure and function of decay accelerating factor CD55. *J. Lab. Clin. Med.* 123: 485-491.
3. Bjorge, L., et al. 1996. Characterization 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.

CHROMOSOMAL LOCATION

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

SOURCE

CD55 (BRIC 216) is a mouse monoclonal antibody raised against a fibroblast cell line of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD55 (BRIC 216) is available conjugated to either phycoerythrin (sc-59092 PE) or fluorescein (sc-59092 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

RESEARCH USE

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

APPLICATIONS

CD55 (BRIC 216) is recommended for detection of CD55 of mouse, rat and 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)] and flow cytometry (1 µg per 1 x 10⁶ 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.

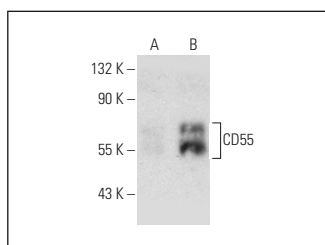
Molecular Weight of CD55: 70 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, PC-3 cell lysate: sc-2220 or CD55 (m): 293T Lysate: sc-119111.

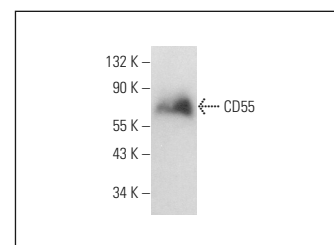
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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).

DATA



CD55 (BRIC 216): sc-59092. Western blot analysis of CD55 expression in non-transfected: sc-117752 (A) and mouse CD55 transfected: sc-119111 (B) 293T whole cell lysates.




CD55 (BRIC 216): sc-59092. Western blot analysis of CD55 expression in HEL 92.1.7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wu, Y., et al. 2014. CD55 limits sensitivity to complement-dependent cytotoxicity triggered by heterologous expression of α-gal xenoantigen in colon tumor cells. *Am. J. Physiol. Gastrointest. Liver Physiol.* 306: G1056-G1064.
2. Liu, M., et al. 2014. Membrane-bound complement regulatory proteins are prognostic factors of operable breast cancer treated with adjuvant trastuzumab: a retrospective study. *Oncol. Rep.* 32: 2619-2627.
3. Kapka-Skrzypczak, L., et al. 2016. Effect of IL-6 and IL-8 on the expression of the complement activation inhibitors MAC-inhibitory protein and decay-accelerating factor in ovarian cancer A2780 cells. *Oncol. Lett.* 12: 1507-1512.
4. Wang, Y., et al. 2017. CD55 and CD59 expression protects HER2-overexpressing breast cancer cells from trastuzumab-induced complement-dependent cytotoxicity. *Oncol. Lett.* 14: 2961-2969.
5. Wang, Y., et al. 2018. Effect of membrane-bound complement regulatory proteins on tumor cell sensitivity to complement-dependent cytotoxicity triggered by heterologous expression of the α-gal xenoantigen. *Oncol. Lett.* 15: 9061-9068.

STORAGE

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



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.