

PN IM2725 CD55-FITC (JS11KSC2.3)
100 tests
20 µL / test



For Research Use Only. Not for use in diagnostic procedures.

SPECIFICITY

CD55, also known as decay-accelerating factor (DAF), is a single chain glycosyl-phosphatidylinositol (GPI)-anchored cell surface protein. Its molecular weight ranges between 55 and 80 kDa, due to post-transcriptional and post-translational modifications (1). The CD55 molecule is widely expressed on human cells including leucocytes, erythrocytes and platelets. CD55 is weakly expressed on NK cells (2). CD55 plays an important role in the complement system by regulating the deposition of C3 on nucleated cells (1). So is it involved in the regulation of both alternative and classical complement pathways C3b/C3Bb convertase and C4b/C4b2a convertase, as well as echovirus, coxsackie B virus (3) and CD97 have been reported to interact with CD55 (4). Like other GPI-anchored proteins, CD55 is associated in the cytoplasmic compartment with tyrosine kinases allowing signal transduction. CD55, like other GPI-anchored proteins (CD59, CD58, acetylcholine esterase), is released in exosomes by reticulocytes undergoing maturation into erythrocytes (5). In paroxysmal nocturnal hemoglobinuria (PNH), impaired transfer of N-acetylglucosamine to phosphatidylinositol leads to a synthetic defect in GPI. As a result, the expression of all GPI-anchored proteins such as CD55 is deficient (6).

JS11KSC2.3 has been assigned to the CD55 cluster of differentiation at the Vth International Workshop on Human Leucocyte Differentiation Antigens in Kobe (1996) under the name JS 11 (2).

REAGENT

Clone JS11KSC2.3
Isotype IgG1, mouse
Hybridoma X63 x Balb/c spleen cells
Source Ascites fluid
Purification Ion exchange or affinity chromatography
Conjugation Fluorescein isothiocyanate (FITC) is conjugated at 3-8 moles of FITC per mole of Ig
 Excitation wavelength 488 nm
 Maximum emission wavelength 525 nm
 Main emission color Green
Buffer 2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.

APPLICATION

Flow cytometry

STATEMENT OF WARNINGS

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.

4. Do not use antibody beyond the expiration date on the label.
5. Do not expose reagents to strong light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.

STORAGE CONDITIONS AND STABILITY

Each reagent is stable up to the expiration date when stored at 2-8°C. Do not freeze. Minimize exposure to light.

REAGENT PREPARATION

No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 20-25°C prior to use.

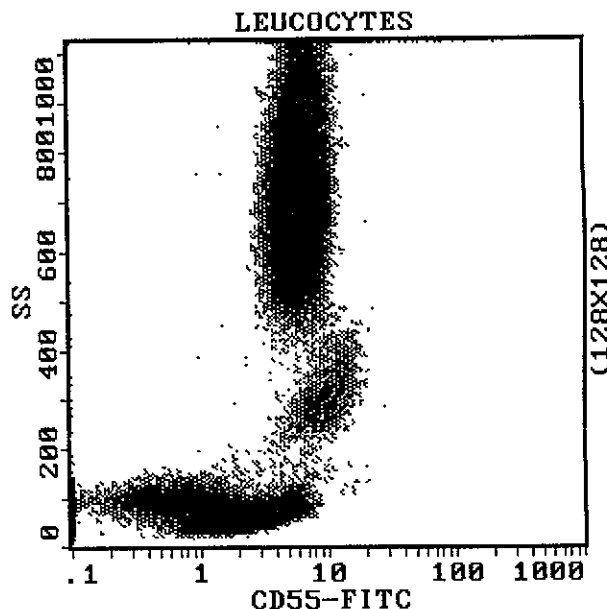
PROCEDURE

This reagent is designed for Flow Cytometry.
 Assay volume, 20 µL per 5 x 10⁵ cells in one test, or per 100 µL whole blood.
 A wash is required to yield optimal results.

EXAMPLE DATA

The histograms below are biparametric representations (Side Scatter versus Fluorescence Intensity) of a lysed normal whole blood sample gated on leucocytes. Staining is with CD55-FITC monoclonal antibody (PN IM2725). Isotypic control labeling (PN IM0639) is not shown.

Figure 1:
 Acquisition is with a COULTER® EPICS® XL™ flow cytometer.
 Analysis is with SYSTEM II™ software.



2725EX190998 Vers 1/19/09/98 AC-98203



PARTNERS IN CELL ANALYSIS



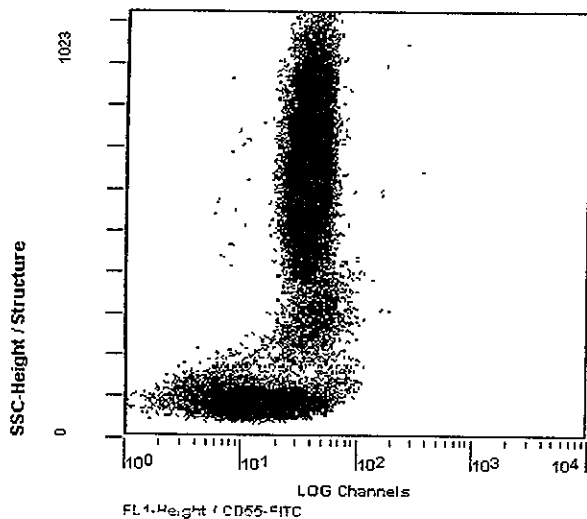
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Figure 2:

Acquisition is with a Becton Dickinson FACScan™ flow cytometer equipped with LYSYS II™ software. Analysis is with EXPO2™ Cytometer software (Coulter PN 6605334)



SELECTED RESEARCH REFERENCES

- [4698] Nicholson-Weller, A., Wang, C, "Structure and function of decay accelerating factor CD55", 1994, J Lab Clin. Med, 123, 485-491
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- [4706] Martino, T A., Petric, M, Brown, M, Aitken, K., Gauntt, C.J, Richardson, C.D, Chow, L H, Liu, P P., "Cardiovirulent coxsackieviruses and the decay-accelerating factor (CD55) receptor", 1998, Virology, 244, 302-314
- [4705] van Lier R A., Eichler, W, Hamann, J, "Sevenspan transmembrane molecules novel receptors involved in leukocyte adhesion", 1996, Immunol. Lett., 54, 185-187
- [4686] Rabesandratana, H, Toutant, J -P, Reggio, H, Vidal, M., "Decay-accelerating factor (CD55) and membrane inhibitor of reactive lysis (CD59) are released within exosomes during in vitro maturation of reticulocytes", 1998, Blood, 91, 2573-2580.
- [4684] Rosse, W F., Ware, R E, "The molecular basis of paroxysmal nocturnal hemoglobinuria", 1995, Blood, 86, 3277-3286

