IOTest® CD58-PC5

PN IM3702 – 100 tests – 10 µL/test – Clone AICD58

For Research Use Only. Not For Use In Diagnostic Procedures.

SPECIFICITY

The CD58 molecule (also known as Lymphocyte-Function Associated Antigen 3 – LFA3) is a glycoprotein with a molecular weight ranging from 55 to 70 kDa that belongs to the immunoglobulin (Ig) superfamily. The extracellular part of the molecule consists of two Ig-like domains with six potential N-linked glycosylation sites. The domain proximal to the cellular membrane is a C2-type Ig-like domain whereas the domain distal to the cellular membrane is a V-type Ig-like domain and lacks the disulfide bond.
Alternative splicing gives rise to either transmembrane or glycosyl-phosphatidyl-inositol (GPI) anchored forms.
The CD58 antigen is expressed on most hematopoietic cells such as T and B lymphocytes, NK cells, monocytes, granulocytes, circulating dendritic subsets, and erythrocytes. It is also expressed on various non-hematopoietic cells, such as fibroblasts, endothelial and epithelial cells.

The CD58 antigen (LFA3) was first described, together with LFA1 (CD11a / CD18) and LFA2 (CD2), as participating in various immunological responses via effector lymphocyte adhesion and activation. It functions as a triggering molecule and mediates its signal through CD2, known as the ligand of CD58, expressed on T lymphocytes and NK cells.
Inhibitory studies have shown that the AICD58 monoclonal antibody (mAb) doesn't block human erythrocyte rosetting (1, 2).
The AICD58 mAb was assigned to the CD58 cluster of differentiation during the 5th Human Leucocyte Differentiation Antigen (HLDA) international workshop, held in Boston, USA, in 1993 (WS Code: S029, Section AS) (1). It was used as a reference clone (WS Code: Ref. 28 Section AS, WS Code: 25 Section BP, and WS Code: 72 Section BP) during the 6th HLDA workshop held in Kobe, Japan, in 1996 (2).

REAGENT

IOTest CD58-PC5 Conjugated Antibodies
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Clone AICD58
Isotype IgG2a, mouse
Immunogen PHA blast
Hybridoma Myeloma x63 Ag 8.653 x Balb/c
Source Ascites fluid
Purification Ion exchange or affinity chromatography
Conjugation The Ig is conjugated to a tandem dye constituted of R-phycoerythrin covalently linked to cyanin 5.1 (PC5) at 0.5 – 1.5 moles of PC5 per mole of Ig.
Excitation wavelength: 488 nm
Maximum emission wavelength: 670 nm
Main emission color: Deep-red
Buffer 2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.

APPLICATION

Studies of cell adhesion molecule expression by flow cytometry.
Studies of CD58 level of expression on bone marrow sample in B-cell neoplasia (3).

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

This 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 18 – 25°C prior to use.

PROCEDURE

This reagent is designed for Flow Cytometry.
Assay volume: 10 µL per 5 x 10^5 cells in one test, or per 100 µL whole blood.
A wash is required to yield optimal results.

SELECTED RESEARCH REFERENCES

1. Klickstein, L.B., Springer, T.A., "CD58 cluster report", 1995, Leucocyte Typing V, White Cell Differentiation Antigens. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 1475-1476.
2. Takeuchi, E., Tanaka, T., Goda, K., Miyasaka, M., "CD58 Workshop Panel report", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 414-415.
3. Chen, J-S., Coustan-Smith, E., Suzuki, T., Neale, G.A., Mihara, K., Pui, C-H., Campana, D., "Identification of novel markers for monitoring minimal residual disease in acute lymphoblastic leukemia", 2001, Blood, 97, 2115-2120.

PRODUCT AVAILABILITY

IOTest CD58-PC5 Conjugated Antibodies
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PC5 is licensed under patents 4,542,104 and 4,520,110

For additional information in the USA, call 800-526-7694.
Outside the USA, contact your local Beckman Coulter representative.

TRADEMARKS

IOTest is a registered trademark of Immunotech S.A.

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Insert No.: 3702EX030602
Vers. 01/ 14/06/02 AC-02-0325

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