



PN IM1289
50 tests
20 µL/test

CD2 - FITC
CD19 - PE

IO Test®
Conjugated Antibodies

For Research Use Only Not for use in diagnostic procedures.

SPECIFICITY

The two antigens are not expressed by the same cell and double labelled cells will not be observed

CD2

The molecular weight of the CD2 antigen is 50 kDa
 CD2 is a human T-lymphocyte antigen originally defined as the sheep erythrocyte receptor It is present on all peripheral T-cells, on over 95% of thymocytes and on natural killer cells, but not on B-cells (1,2)

Several epitopes can be distinguished on the target molecule The antibody 39C1 5 reacts with the T11-1 epitope

CD19

The molecular weight of the CD19 antigen is 90 kDa.
 The antigen characterizes all B cells including progenitor B cells CD19 antigen can also be found on follicular dendritic cells and myelomonocyte lineage progenitor cells CD19 is a Pan B marker

REAGENT

CD2	CD19
39C1 5	J4 119
IgG2a rat	IgG1 mouse
P3-X63-Ag 8 653 x rat spleen cells	NS1 x Balb/c spleen cells

Source Ascites fluid

Purification Ion exchange or affinity chromatography

Conjugations FITC Fluorescein isothiocyanate (FITC) is conjugated at 4 - 8 moles of FITC per mole of IgG

Excitation wavelength 488 nm

Maximum emission wavelength 525 nm

Main emission color Green

PE R-phycoerythrin (PE) is conjugated at 0.7-1 mole of PE per mole of IgG

Excitation wavelength 488 nm

Maximum emission wavelength 575 nm

Main emission color Orange-red

Buffer 2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide

APPLICATION

Characterization of T and B lymphocyte populations by 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/5 x 10⁵ cells / test or 100µL whole blood

A wash is required to yield optimal results

EXAMPLE DATA

The graphs below are biparametric representations (Fluorescence Intensity versus Fluorescence Intensity) of a lyzed normal whole blood sample Staining is with CD2-FITC / CD19-PE dual color reagent (PN IM1289) gated on lymphocytes

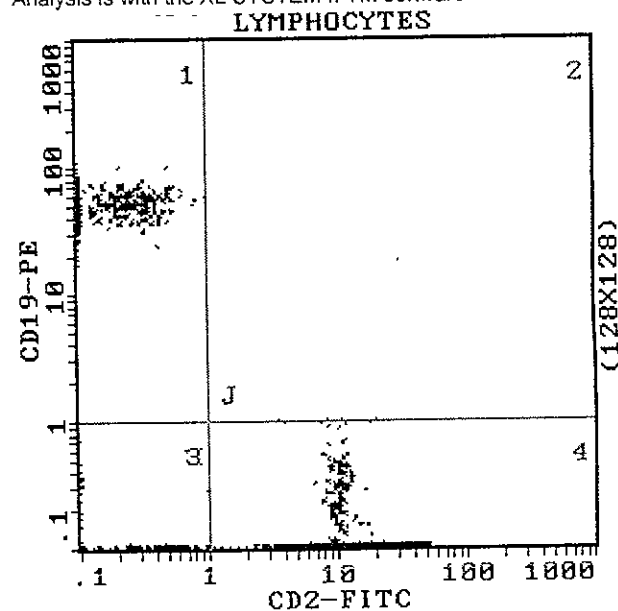
*Upper-left quadrant (1) contains CD2-negative, CD19-positive B lymphocytes

*Upper-right quadrant (2) contains rare, if any, CD2 and CD19 double positive events

*Lower-left quadrant (3) contains CD2 and CD19 double negative events

*Lower-right quadrant (4) contains CD2-positive, CD19-negative lymphocytes, including T lymphocytes and most of the NK lymphocytes

Acquisition is with a COULTER R EPICS R XL TM flow cytometer
 Analysis is with the XL SYSTEM II TM software



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PARTNERS IN CELL ANALYSIS



PN IM1289

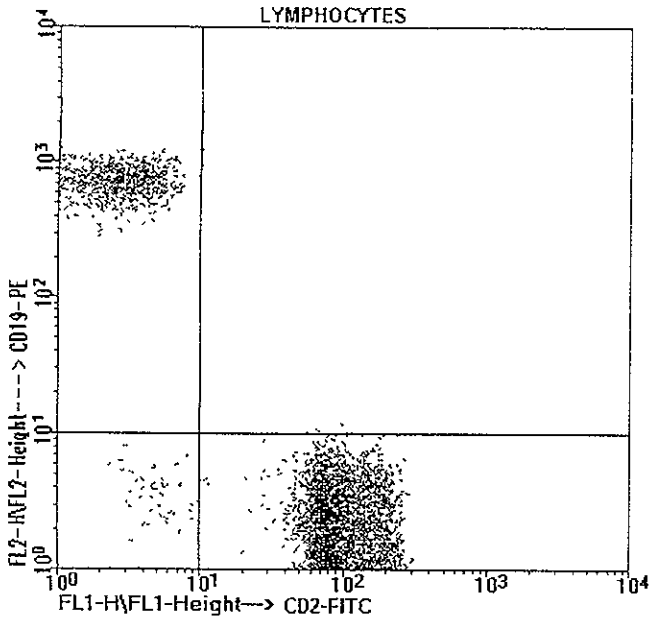
50 tests
20 µL/test

CD2 - FITC

CD19 - PE

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Acquisition is with a Becton Dickinson FACScan™ flow cytometer
Analysis is with the LYSYS II™ software



SELECTED RESEARCH REFERENCES

- 1-[1970] Bierer, B E, Bogart, R E, Wolf, L H, Burkakof, S J, "Functional analysis of CD2 mAb reactivity", 1989, Leucocyte Typing IV, White Cell Differentiation Antigens W Knapp, et al, Eds, Oxford University Press, p 274-277
- 2-[31] Sewel, W A, Brown, M H, Dunne, J, Totty, N F, Owen, M J, Crumpton, M J, "Primary structure of CD2 predicted from cDNA nucleotide sequences", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, A J McMichael, p 107-109
- 3-[855] Foon, K A, Todd, R F, "Immunologic classification of leukemia and lymphoma", 1986, Blood, 1 68 1-31
- 4-[984] Freedman, A S, Nadler, L M, "Cell Surface Markers in Hematologic Malignancies", 1987, Seminars in Oncology, 2, 14 193-212
- 5-[90] Olive, D, Ragueneau, M, Cerdan, C, Dubreuil, P, Lopez, M, Mawas, C, "Anti-CD2 (Sheep red blood cell receptor) monoclonal antibodies and T-cell activation Pairs of anti-T11-1 and T11-2 (CD2 subgroups) are strongly mitogenic for T cells in presence of 12-O tetradecanoylphorbol 13 acetate", 1986, Eur J Immunol, 16, 1063-1068
- 6-[930] Pezzuto, A, Dorken, B, Rabinovitch, P S, Ledbetter, J A, Moldenhauer, G, Clark, E A, "CD19 monoclonal antibodies inhibit B-cell activation and proliferation" 1987, Leucocyte Typing III, White Cell Differentiation Antigens, A J McMichael, p 358-360
- 7-[2050] Zola, H, Neoh, S H, Potter, A, Melo, J V, De Oliveira, M S P, Catovsky, D, "Markers of differentiated B cell leukaemia CD22 antibodies and FMC7 react with different molecules", 1987, Imm Today, 10, 8, 308-315

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