IOTest®
CD8-FITC/CD4-PE/
CD3-PC7

REF **6607103 - 50 tests**

PN 4238104-CA

BECKMAN COULTER®

	CD8-FITC	CD4-PE	CD3-PC7
Specificity	CD8	CD4	CD3
Clone	SFCI21Thy2D3	SFCI21T4D11	UCHT1
Hybridoma	NS1 x BALB/c	NS1 x BALB/c	NS1 x BALB/c
Immunogen	Peripheral blood lymphocytes	Peripheral blood lymphocytes	Peripheral blood lymphocytes
Ig Chain	IgG1	IgG1	IgG1
Species	Mouse	Mouse	Mouse
Source	Conditioned media	Conditioned media	Conditioned media
Purification	Affinity chromatography	Affinity chromatography	Affinity chromatography
Fluorescence	Excites 468-509 nm / Emits 504-541 nm	Excites 486-580 nm / Emits 568-590 nm	Excites 486-580 nm / Emits 710-800 nm
Conjugation	FITC (Fluorescein Isothiocyanate)	PE (Phycoerythrin)	PC7 (Phycoerythrin-Cy7)
Molar Ratio	FITC/Ig: 4-6	PE/Ig: 0.5-1.5	PC7/Ig: 0.5-1.5
Scatter Detection	Forward and/or side	Forward and/or side	Forward and/or side

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

SPECIFICITY

The CD8 molecule is a disulfide-linked dimer which exists either as a CD8α homodimer or as a CD8$\alpha\beta$ heterodimer. The CD8 antigen is expressed by the "cytotoxic/ suppressor" T lymphocyte subpopulation (Tc cells) and with a lower density by a subset of NK cells.[1] The majority of Tc cells express the CD8 molecule as an α/β heterodimer whereas NK cells are essentially CD8α+/β-(CD8α+/β+).[1,2]

The CD4 molecule is a monomeric transmembrane glycoprotein expressed on a specific subset of peripheral blood T lymphocytes named "helper" T (Th) cells or T4 lymphocytes.[3] It is expressed on the majority of the thymocytes, where it is frequently co-expressed with CD8.[4] CD4 is also expressed on non-T cells like the monocytes and the eosinophils. All the monocytes carry the CD4 antigen, although at a lower density than on T4 lymphocytes.

The CD3 antigen is a complex of 5 polypeptide chains: α, β, ε, ζ and η associated with the TcR.[5] The CD3 antigen is expressed by mature T lymphocytes and by a subset of thymocytes.[6] The UCHT1 mAb reacts with the ε chain of the CD3 complex.[5] It has been assigned to the CD3 cluster of differentiation at the 1st International HLDA Workshop in Paris, France, in 1982 (WS Code: 3, Section T).[7]

REAGENT

See table above.

REAGENT CONTENTS

Contact Beckman Coulter Customer Service to obtain the antibody concentration in the IOTest reagent.

The nonantibody reagents are 2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.

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. Use Good Laboratory Practices (GLP) when handling reagent.
7. Harmful if swallowed.
8. After contact with skin, wash immediately with plenty of water.

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.

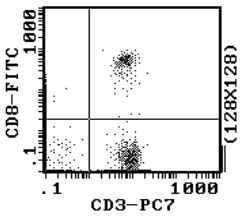
PROCEDURE

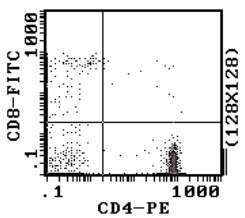
This reagent is designed for flow cytometry. Assay Volume; 20 µL per 5 x 10^5 cells in one test, or per 100 µL of whole blood. A wash is required to yield optimal results.

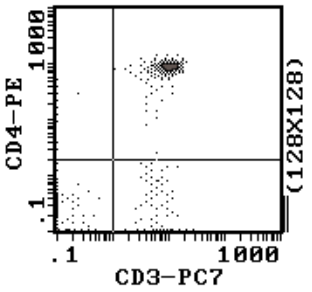
EXAMPLE DATA

The histograms shown are representative of a normal EDTA whole blood sample, stained with CD8-FITC/ CD4-PE/CD3-PC7 multicolor reagent (PN 6607103).

Figures:
Acquisition with a COULTER® EPICS™ XL™ and XL-MCL™ flow cytometer.







SELECTED RESEARCH REFERENCES

1. Terry, L.A., DiSanto, J.P., Small, T.N., Flomenberg, N. "Differential expression and regulation of the human CD8alpha and CD8beta chains", 1990, Tissue Antigens - 35 - 82-91.
2. Moebius, U., Kober, G., Griscelli, A.L., Hercend, T., Meuer, S.C., "Expression of different CD8 isoforms on distinct human lymphocyte subpopulations",1991, Eur. J. Immunol., 21, 1793-1800.
3. Sprent, J., "T lymphocytes and the thymus", 1989, Fundamental Immunology, Chap 4, 2nd Ed., 69-93.
4. Miceli, M.C., Parnes, J.R., "The roles of CD4 and CD8 in T cell activation", 1991, Immunol., 3, 133-141.
5. Tunnacliffe, A., Olsson, C., Traunecker, A., Krissansen, G.W., Karjalainen, K., De la Hera, A., "The majority of CD3 epitopes are conferred by the e chain", 1989, Leucocyte Typing IV, White Cell Differentiation Antigens. W. Knapp, et al., Eds., Oxford University Press, 295-296.
6. Bernard, A., Grottier, P., Georget, E., Lepage, V., Boumsell, L., "Joint report of the first international workshop on human leucocyte differentiation antigens by the investigators of the participating laboratories", 1984, Leucocyte Typing I, Bernard, A. et al., Springer Verlag, 9-135.
7. Shores, E.W., Love, P.E., "TCR-chain in T cell development and selection", 1997, Curr. Immunol., 9, 380-389.

PRODUCT AVAILABILITY

IOTest CD8-FITC/CD4-PE/CD3-PC7
Conjugated Antibodies
PN 6607103 - 50 tests - 20 µL/test

TRADEMARKS

For additional information, or if damaged product is received, call Beckman Coulter Customer Service at 800-526-7694 (USA or Canada) or contact your local Beckman Coulter Representative.

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