

Monoclonal Antibody IOTest® Anti-TCR Vα24-PC7

PN A66907- 50 tests – Liquid - 10 µL/test - Clone C15

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

SPECIFICITY

Human variable α24 chain of the T cell receptor is also called TCRAV24S1 according to the nomenclature from Arden et al (1).

Vα24 is the only described member of the subfamily of the T cell receptor (2). The monoclonal antibody C15 recognizes the IGRa02 sequence (3, 4). It stains 0.4 to 1% of peripheral CD3 positive lymphocytes from normal donors. Vα24 has been shown to be expanded in a clonal fashion in the CD3+ CD8- CD4- cell population in PBL of several donors (3, 4).

The IGRa02 sequence is also referred to as TRAV10 (based on the IMGT gene nomenclature) (5, 6).

The specificity of this antibody has been confirmed at the first Human TcR Monoclonal Antibody Workshop in San Francisco in 1995 (7).

REAGENT

IOTest Anti-TCR Vα24-PC7 Conjugated Antibody.
PN A66907 - 50 tests - Liquid - 10 µL/test

Clone	C15
Isotype	IgG1, Mouse
Immunogen	CTL-09
Hybridoma	PAI x Balb/c
Source	Ascites fluid
Purification	Ion exchange
Conjugation	Phycoerythrin-Cyanin 7 (PC7)
Molar Ratio	PC7 / Ig : 0.5 - 1.5
Fluorescence	Excites at 486-580 nm Emits at 710-800 nm

REAGENT CONTENTS

This antibody is provided in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin.

APPLICATION

Flow cytometry.

STATEMENTS OF WARNING

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.
7. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze.

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.

PRECAUTIONS

Due to the tandem structure of the fluorochrome, PC7 also emits light at 575 nm. This secondary emission peak varies from lot-to-lot of PC7. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a PC7-conjugate

PROCEDURE

This reagent is designed for Flow Cytometry. Assay volume: 10 µL per 5×10^5 cells in one test, or per 100 µL whole blood.

“Fix-and-lyse” mixture: Preparation of working solution (quantity for 1 tube):

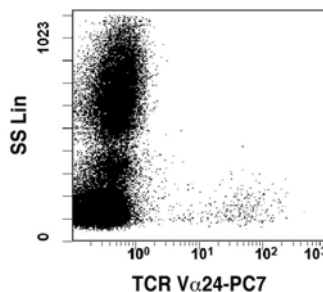
Freshly mix 1 mL of Versalyse™ with 25 µL of undiluted IOTest Fixative. Prepare a sufficient amount of the “fix-and-lyse” mixture for the total number of samples.

NOTE : Unlike what is stated on the package insert of the IOTest Fixative Solution, the present procedure does not use this fixative solution as a 10X concentrated solution.

EXAMPLE DATA

Histogram 1 :

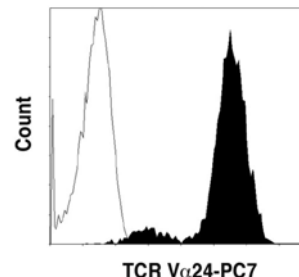
The histogram below is a biparametric representation, side scatter (SS) versus fluorescence intensity of a whole blood sample for TCR Vα24 expression stained with Anti-TCR Vα24-PC7 conjugated antibody. Acquisition is with a Beckman Coulter FC 500 flow cytometer equipped with the CXP analysis software.



Histogram 2 :

The histogram below is a monoparametric representation, count versus fluorescence intensity, on lymphocytes sorted for TCR Vα24 expression. Staining is with Anti-TCR

Vα24-PC7 conjugated antibody. The isotypic control labeling (See Catalog for PN) is shown in light.



SELECTED RESEARCH REFERENCES

1. Arden, B., Clark, S.P., Mak, T.W., “Human T cell receptor variable gene segment families”, 1995, Immunogenetics, 42, 455-500.
2. Ferradini, L., Roman-Roman, S., Azocar, J., Michalaki, H., Triebel, F., Hercend, T., “Studies on the human TCR α/β variable region genes II. Identification of four additional V beta subfamilies”, 1991, Eur.J. Immunol., 21, 935-942.
3. Padovan, E., Casorati, G., Dellabona, P., Meyer, S., Brockhaus, M., Lanzavecchia, A., “Expression of two T-cell receptor α chains: Dual receptor Tcells”, 1993, Science, 262, 422-424.
4. Dellabona, P., Padovan, E., Casorati, G., Brockhaus, M., Lanzavecchia, A., “An invariant Vα24-JαQ/Vβ11 T-cell receptor is expressed in all individuals by clonally expanded CD4⁺ T cells”, 1994, J. Exp. Med., 180, 1171-1176.
5. Lefranc, M.P., Giudicelli, V., Ginestoux, C., Bodmer, J., Muller, W., Bontrop, R., Lemaitre, M., Malik, A., Barbie, V., Chaume D., “IMGT, the international ImMunoGeneTics database”, 1999, Nucleic Acids Res., 27, 209-212.
6. Lefranc, M.P., “IMGT, the international ImMunoGeneTics database”, 2003, Nucleic Acids Res., 31, 307-310.
7. Posnett, D.N., Romagné, F., Necker, A., Kotzin, B.L., Sekaly, R.-P., “First Human TcR Monoclonal Antibody Workshop”, 1996, The Immunologist., 4, 5.

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