

Monoclonal Antibody IOTest[®] Anti-TCR Vβ11-APC

PN A66905 – 50 tests – Liquid – 10 µL/test – Clone C21

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

SPECIFICITY

Human variable β11 chain of the T-cell receptor (TCR), also called TCRBV11S1 according to the nomenclature from Wei et al (1) and also referred to as TRBV25-1 (based on the IMGT gene nomenclature) (2, 3). Two Vβ11 sequences are described, PL3.12 (4) and PH15 (5). These sequences differ only in their leader sequence and therefore lead to the same mature protein.

The C21 recognizes the gene product of these sequences and stains 0.4% to 0.9% of peripheral CD3⁺ cells in normal blood.

An invariant Vα24/Vβ11 T cell receptor is expressed in all individuals by clonally expanded CD4⁺ CD8⁻ T cells, reactive to bacterial antigens. This unique lymphocyte population restricted by the CD1d molecule recognition has been identified as the natural killer T (NKT) cells.

The specificity of this antibody has been confirmed at the First Human TcR Monoclonal Antibody Workshop in San Francisco in 1995 (6).

REAGENT

IOTest Anti-TCR Vβ11-APC Conjugated Antibody
PN A66905 - 50 tests - Liquid - 10µL/test

Clone	C21
Isotype	IgG2a, Mouse
Immunogen	CTL-09
Hybridoma	PAI x Balb/c
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	Allophycocyanin (APC)
Molar Ratio	APC / Ig : 0.5 - 1.5
Fluorescence	Excites at 600–655 nm Emits at 650-680 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.

PROCEDURE

This reagent is designed for Flow Cytometry. Assay volume: 10 µL per 5 x 10⁵ cells in one test, or per 100 µL whole blood. It is preferable to double stain the sample with another T-cell marker (CD3, CD4, CD8).

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

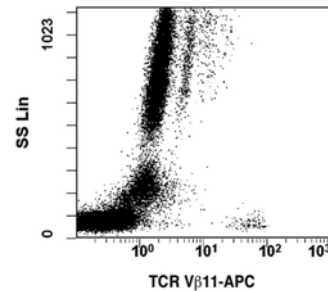
Freshly mix 1 mL of Versalyse™ with 25 µL of undiluted IOTest Fixative. Prepare a sufficient amount of the “fix-and-Lyse” mixture for the total number of samples.

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

The histogram below is a biparametric representation, side scatter (SS) versus fluorescence intensity of a lysed normal whole blood sample.

Acquisition is with a Beckman Coulter FC 500 flow cytometer equipped with the CXP analysis software.



SELECTED RESEARCH REFERENCES

1. Wei, S., Charmley, P., Robinson, M.A., Concannon, P., “The extent of the human germline T-cell receptor V beta gene segment repertoire”, 1994, Immunogenetics, 40, 27-36.
2. Lefranc, M.P., Giudicelli, V., Ginestoux, C., Bodmer, J., Muller, W., Bontrop, R., Lemaire, M., Malik, A., Barbie, V., Chaume D., “IMGT, the international ImMunoGeneTics database”, 1999, Nucleic Acids Res., 27, 209-212.
3. Lefranc, M.P., “IMGT, the international ImMunoGeneTics database”, 2003, Nucleic Acids Res., 31, 307-310.
4. Concannon, P., Pickering, L., Kung, P., Hood, L., “Diversity and structure of human T-cell receptor beta-chain variable region genes”, 1986, Proc. Natl. Acad. Sci. USA, 83, 6598-6602.
5. Tillinghast, J.P., Behlke, M.A., Loh, D.Y., “Structure and diversity of the human T-cell receptor beta chain variable region genes”, 1986, Science, 22, 879-883.
6. Posnett, D.N., Romagné, F., Necker, A., Kotzin, B.L., Sekaly, R.-P., “First Human TcR Monoclonal Antibody Workshop”, 1996, The Immunologist, 4, 5-8.

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Printed in France.

Made in France.

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