IOTest® Anti-TCR Vβ11-FITC

PN IM1586 – 50 tests – 20 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), 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-FITC Conjugated Antibody
PN IM1586 – 1 mL Liquid – 50 tests – 20 µL / test.

Clone	C21
Isotype	IgG2a, mouse
Immunogen	Human T-cell hybridoma
Hybridoma	P3-X63-Ag.8.653 x SJL spleen cells
Source	Ascites fluid
Purification	ion exchange chromatography
Conjugation	FITC (Fluorescein isothiocyanate) is conjugated at 3 – 10 moles of FITC per mole of Ig.
Fluorescence	FITC (Green) Excites at 468 – 509 nm Emits at 504 – 541 nm
Buffer	2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.

APPLICATION

Studies of TCR Vβ11 positive cells 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.
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 in the dark. Do not freeze.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this FITC-labeled reagent (clear, colorless to yellowish-green liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

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.
A wash is required to yield optimal results
Assay volume: 20 µL per 5 x 10^5 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).

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., Lemaitre, 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.

PRODUCT AVAILABILITY

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

www.beckmancoulter.com

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