

IOTest[®] Anti-TCR Pan α/β -PC5

PN A39500 – 0.5 mL Liquid – 10 μ L / test* – Clone IP26A

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

Human T cells recognize foreign antigens, in the context of host HLA molecules through the T-cell receptor for antigen (TcR) (1-3). The TcRs are molecular complexes which comprise two units: a recognition unit, composed of either α - β or γ - δ heterodimer, which are present on the cell surface in a mutually exclusive manner, and, a transducing unit, the CD3 complex, common to α - β and γ - δ heterodimers, which triggers the T cell when the recognition unit is occupied by the antigen. The recognition units recognize any possible foreign antigen and the diversity necessary for this function of recognition is generated by somatic recombination the TcR genes. There are four TcR gene loci (α , β , γ and δ). Each of them is composed of several V (for variable) segments, coding for about 90 amino acids, very short D (for diversity) segments (α and δ loci only), and short J (for joining) segments (about 15 amino acids), and one or two C (for constant) segments (4-7).

The IP26A antibody recognizes a monomorphic determinant of the human α/β chain of the TcR complex.

REAGENT

IOTest Anti-TCR Pan α/β -PC5 Conjugated Antibody
PN A39500 – 0.5 mL Liquid – 10 μ L / test*.

Clone IP26A

Ig chain IgG1 Kappa, Mouse

Immunogen T cell clone

Hybridoma NS1 x Balb/c

Source Ascites fluid

Purification Ion exchange or affinity chromatography

Conjugation PC5: The Ig is conjugated to a tandem dye constituted of R-phycoerythrin covalently linked to Cy5 at 0.5 – 1.5 mole of PC5 per mole of Ig.

Fluorescence PC5 (Deep Red)
Excites at 486–580 nm
Emits at 660–680 nm

REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline, with 0.1% sodium azide (NaN_3) as preservative, and 2.0 mg / mL bovine serum albumin (BSA).

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. Do not use antibody beyond the expiration date on the label.
3. Samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
4. Never pipet by mouth and avoid contact of samples with skin and mucous membranes
5. Minimize exposure of reagent to 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. Minimize exposure to light.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this PC5-labeled reagent (clear colorless to pinkish liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

REAGENT PREPARATION

No preparation is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

SELECTED RESEARCH REFERENCES

1. J.P., "Structure, function, and serology of the T-cell antigen receptor complex", 1987, Annu. Rev. Immunol., 5, 503-539.
2. Clevers, H., Alarcon, B., Wileman, T., Terhorst, C., "The T cell receptor / CD3 complex: A dynamic protein ensemble", 1988, Annu. Rev. Immunol., 6, 629-662.
3. Porcellii, S., Brenner, M.B., Band, H., "Biology of the human $\gamma\delta$ T-cell receptor", 1991, Immunol. Rev., 120, 137-183.
4. Wei, S., Charmley, P., Robinson, M.A., Concannon, P., "The extent of the

human germline T-cell receptor V β gene segment repertoire", 1994, Immunogenetics, 40, 27-36.

5. Arden, B., Clark, S.P., Mak, T.W., "Human T cell receptor variable gene segment families", 1995, Immunogenetics, 42, 455-500.
6. Peyrat, M.A., Davodeau, F., Houde, I., Romagné, F., Necker, A., Leget, C., Cervoni, J.P., Cerf-Bensoussan, N., Vié, H., Bonneville, M., Hallet, M.M., "Repertoire analysis of human PBL using a human V δ 3 region specific mAb. Characterization of dual TCR δ chain expressors and $\alpha\beta$ T cells expressing V δ 3/J α/C α -encoded TCR chains", 1995, J. Immunol., 155, 3060-3067.
7. Thibault, G., Bardos, P., "Compared TCR and CD3 ϵ expression on $\alpha\beta$ and $\gamma\delta$ cells. Evidence for the association of two TCR heterodimers with three CD3 ϵ chains in the TCR/CD3 complex", 1995, J. Immunol., 154, 3814-3820.

PRODUCT AVAILABILITY

IOTest Anti-TCR Pan α/β -PC5 Conjugated Antibodies
PN A39500 – 0.5 mL Liquid – 10 μ L / test*.

PC5 is licensed under patents 4,542,104 and 4,520,110.
Cy5 is licensed under patents 4,981,977 and 5,268,486.

For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

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(*) : 10 μ L is the quantity of product sufficient to stain

5 x 10⁵ cells in a standard immunofluorescence assay

