

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The TCR is a molecular complex which comprises two units: a recognition unit, composed of either alpha-beta or gamma-delta heterodimer, which are present on the cell surface in a mutually exclusive manner, and, a transducing unit, the CD3 complex, common to alpha-beta and gamma-delta heterodimers, which triggers the T cell when the recognition unit is occupied by the antigen. The recognition unit recognizes foreign antigens and the diversity necessary for this function of recognition is generated by somatic recombination the TCR genes (1-3). There are four TCR gene loci (alpha, beta, gamma and delta). Each of them is composed of several V (variable) segments, coding for about 90 amino acids, very short D (diversity) segments (α and delta loci only), and short J (joining) segments (about 15 amino acids), and one or two C (constant) segments (4,5). Most of T cells express the alpha/beta TCR (T cell receptor) protein and a small population of T cells expresses the gamma/delta TCR, which usually has a double negative (CD4/CD8) phenotype. Gamma/delta T-cells are normally the first line of defence at epidermal and epithelial surfaces and they represent 10-12% of lymphocytes in the spleen (6). IMMU 510 recognizes all the gamma/delta T cells regardless the variable genes or junction regions they express as assessed by flow immunofluorescence studies on polyclonal gamma/delta T-cell lines as well as gamma/delta T-cell clones (7-11).

REAGENT

IOtest TCR γ/δ -PC5.5
 Conjugated antibody
 PN A99021 - 0.5 mL - Liquid - 10 μ L/test

Clone	IMMU510
Isotype	IgG1, Mouse
Immunogen	TCR Gamma-delta soluble
Hybridoma	P3-X63-Ag.8.653 x balb/c
Source	Ascites fluid or supernatant of in vitro cultured hybridoma cells.
Purification	Affinity chromatography
Conjugation	R Phycoerythrin-Cyanine 5.5 (PC5.5)
Molar Ratio	PC5.5 / Ig : 0.5 - 1.5
Fluorescence	Excites at 488 nm Emits at 692 nm

REAGENT CONTENTS

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

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 considered potentially infectious 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 AND HANDLING CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. 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, PC5.5 also emits light at 575 nm. This secondary emission peak varies from lot-to-lot of PC5.5. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a PC5.5-conjugate.

SELECTED RESEARCH REFERENCES

1. Allison, 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. Porcelli, S., Brenner, M.B., Band, H., "Biology of the human $\gamma\delta$ T-cell receptor", 1991, *Immunol. Rev.*, 120, 137-183.
4. Wei, S., Charnley, 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. Falini, B., Flenghi, L., Pileri, S., Pelicci, P., Fagioli, M., Martelli, M.F., Moretta, L., Ciccone, E., "Distribution of T cells bearing different forms of the T cell receptor $\gamma\delta$ in normal and pathological human tissues" 1989, *J Immunol.*, 143, 2480-2488.
7. Davodeau, F., Houde, I., Boulot, G., Romagné, F., Necker, A., Canavo, N., Peyrat, M.A., Hallet, M.M., Vie, H., Jacques, Y., Mariuzza, R., Bonneville, M., "Secretion of disulfide linked human TCR $\gamma\delta$ heterodimers", 1993, *J. Biol. Chem.*, 268, 15455-15460.
8. Davodeau, F., Peyrat, M.A., Houde, I., Hallet, M.M., De Libero, G., Vié, H., Bonneville, M., "Surface Expression of two distinct functional antigen receptors on human $\gamma\delta$ T cells", 1993, *Science*, 260, 1800-1802.
9. Davodeau, F., Peyrat, M.A., Romagné, F., Necker, A., Hallet, M.A., Vié, H., Bonneville, M., "Dual T cell receptor β chain expression on human T lymphocytes", 1995, *J. Exp. Med.*, 181, 1391-1398.
10. 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.
11. 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.

TRADEMARKS

Beckman Coulter logo and IOtest, are trademarks of Beckman Coulter; Beckman Coulter logo, IOtest are registered in the USPTO and SIPO.

MANUFACTURED BY :

IMMUNOTECH SAS
 a Beckman Coulter Company
 130, avenue de Lattre de Tassigny
 B.P. 177 - 13276 Marseille Cedex 9
 France

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

Outside the USA, contact your local Beckman Coulter representative.

www.beckmancoulter.com

Printed in France.

Made in France.

©2011 Beckman Coulter, Inc.