

### Analyte Specific Reagent.

Analytical and performance characteristics are not established.

#### SPECIFICITY

T lymphocytes constitute the majority of human peripheral blood lymphocytes (PBL) (1). T lymphocytes are characterized by the expression of the CD3 antigen (1, 2). The CD3 antigen is a complex of 5 polypeptide chains:  $\gamma$ ,  $\delta$ ,  $\epsilon$ ,  $\zeta$  and  $\eta$  associated with the T cell receptor (TCR) complex (3). The CD3 chains are clustered in a group of two invariant dimers,  $\gamma/\epsilon$  and  $\delta/\epsilon$  associated with a variable dimer which consists of  $\zeta$  homodimers, or  $\zeta/\eta$ , or  $\zeta/\gamma$ FcR heterodimers ( $\gamma$ FcR being the  $\gamma$  chain of the Fc receptors), or  $\gamma$ FcR homodimers (3-5). The CD3 complex associated with the TCR is involved in the recognition of peptides bound to the major histocompatibility complex class I and II during the immune response (6). The CD3 antigen is expressed by mature T lymphocytes and by a subset of thymocytes (7). The UCHT1 monoclonal antibody reacts with the  $\epsilon$  chain of the CD3 complex (8). It has been assigned to the CD3 cluster of differentiation at the 1st International Workshop on Human Leucocyte Differentiation Antigens in Paris, France, in 1982 (9).

#### REAGENT

IOTest CD3-Krome Orange  
Conjugated antibody  
PN B00068 - 0.5 mL - Liquid - 10 µL/test\*

<b>Clone</b>	UCHT1
<b>Isotype</b>	IgG1 kappa, Mouse
<b>Immunogen</b>	T cell line + IL2
<b>Hybridoma</b>	NS1 x balb/c
<b>Source</b>	Ascites fluid
<b>Purification</b>	Affinity chromatography
<b>Conjugation</b>	Krome Orange (Krome Orange)
<b>Molar Ratio</b>	Krome Orange / Ig: 4.2 - 7.6
<b>Fluorescence</b>	Excites at 405 nm Emits at 528 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 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.

#### SELECTED RESEARCH REFERENCES

1. Hannet, I., Erkeller-Yuksel, F., Lydyard, P., Deneys, V., DeBruyère, M., "Developmental and maturational changes in human blood lymphocyte subpopulations", 1992, *Immunol. Today*, 13, 215-218.
2. Sprent, J., "T lymphocytes and the thymus", 1989, *Fundamental Immunology*, Chap 4, 2nd Ed., 69-93.
3. Thibault, G., Bardos, P., "Compared TCR and CD3 $\epsilon$  expression on  $\alpha\beta$  and  $\gamma\delta$  cells. Evidence for the association of two TCR heterodimers with three CD3 $\epsilon$  chains in the TCR/CD3 complex", 1995, *J. Immunol.*, 154, 3814-3820.
4. Shores, E.W., Love, P.E., "TCR  $\zeta$ -chain in T cell development and selection", 1997, *Cur. Opin. Immunol.*, 9, 380-389.

5. Ono, S., Ohno, H., Saito, T., "Rapid turnover of the CD3 $\zeta$  chain independent of the TCR-CD3 complex in normal T cells", 1995, *Immunity*, 2, 639-644.
6. Julius, M., Maroun, C.R., Haughn, L., "Distinct roles for CD4 and CD8 as coreceptors in antigen receptor signalling", 1993, *Immunol. Today*, 14, 177-183.
7. van Agthoven, A., Terhorst, C., Reinherz, E.L., Schlossman, S.F., "Characterization of T cell surface glycoproteins T1 and T3 present on all human peripheral T lymphocytes and functional mature T lymphocytes", 1981, *Eur. J. Immunol.*, 11, 18-21.
8. Tunnacliffe, A., Olsson, C., Traunecker, A., Krissansen, G.W., Karjalainen, K., De la Hera, A., "The majority of CD3 epitopes are conferred by the  $\epsilon$  chain", 1989, *Leucocyte Typing IV*, White Cell Differentiation Antigens. W. Knapp, et al., Eds., Oxford University Press, 295-296.
9. Bernard, A., Brottier, P., Georget, E., Lepage, V., Boumsell, L., "Joint report of the first international workshop on human leucocyte differentiation antigens by the investigators of the participating laboratories", 1984, *Leucocyte Typing I*, Bernard, A. et al., Springer Verlag, 9-135.

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Printed in France.  
Made in France.

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(\*): 10 µL is the quantity of product sufficient to stain  
5 x 10<sup>5</sup> cells in a standard immunofluorescence assay