

### Analyte Specific Reagent.

Analytical and performance characteristics are not established.

#### SPECIFICITY

The CD7 antigen is a monomeric transmembranous glycoprotein with a molecular weight of 40 KDa. The distal extracellular part of the protein is composed of a unique section of the "immunoglobulin variable region" type. The CD7 molecule is expressed early during T cell ontogeny (extrathymic prothymocyte stage) and persists up to the mature T cell lymphocyte stage (1 – 3). The CD7 antigen is present on thymocytes, on the majority of circulating T cell lymphocytes, on NK cells, on a sub-population of pre-B lymphocytes, on B cell lymphocytes originating from foetal bone marrow and on haematopoietic pluripotent stem cells (4, 5). On the other hand, mature B cell lymphocytes, and cells of erythrocytic, myeloid and megakaryocytic origin do not express CD7 (1, 5).

The monoclonal antibody 8H8.1 was assigned to CD7 during the 2<sup>nd</sup> HLDA workshop on Human Leucocyte Differentiation Antigens, Workshop held in Boston, United States, in 1984 (WS Code: 38, Section T) (6).

#### REAGENT

IOTest CD7-PE Conjugated Antibody  
PN IM1429U – 2 mL Liquid – 20 µL / test\*.

|                     |   |
|---------------------|---|
| <b>Clone</b>        | 8H8.1   |
| <b>Isotype</b>      | IgG2a, mouse  |
| <b>Immunogen</b>    | Human thymocytes  |
| <b>Hybridoma</b>    | Myeloma P3X63.Ag8 x Balb/c  |
| <b>Source</b>       | Ascites fluid   |
| <b>Purification</b> | Ion exchange or affinity chromatography                                     |
| <b>Conjugation</b>  | R-phycoerythrin (PE) is conjugated at 0.5 – 1.5 moles of PE per mole of Ig. |
| <b>Fluorescence</b> | PE (orange-red)<br>Excites at 486 – 580 nm<br>Emits at 568 – 590 nm         |

#### REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline, with 0.1% sodium azide (NaN<sub>3</sub>) 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 PE-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. Chang, K.L., Weiss, L.M., "CD7: a review", 1994, Appl. Immunohistochem., 2, 146-156.
2. Civin, C.I., Gore, S.D., "Antigenic analysis of hematopoiesis : a review", 1993, J. Hematol., 2, 137-144.
3. Mossalayi, D., Dalloul, A.H., Bertho, J.M., Lecron, J.C., De Laforest, P.G., Debre, P., "In vitro differentiation and

proliferation of purified human thymic and bone marrow CD7+CD2- T-cell precursors", 1990, Exp. Hematol., 18, 326-331.

4. Grümayer, E.R., Griesinger, F., Hummel, D.S., Brunning, R.D., Kersey, J.H., "Identification of novel B-lineage cells in human fetal bone marrow that coexpress CD7", 1991, Blood, 77, 64-68.
5. Lazarovits, A.I., Colvin, R.B., Camerini, D., Karsh, J., Kurnick, J.T., "Modulation of CD7 is associated with T-lymphocyte function", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, McMichael A.J., et al., Eds., Oxford University Press, 219-223.
6. Palker, T.J., Searce, R.M., Hensley, L.L., Ho, W., Haynes, B.F., "Comparison of the CD7 (3A1) group of T cell Workshop antibodies", 1986, Leucocyte Typing II, Human T lymphocytes, Reinherz, E.L., et al. Eds., Springer-Verlag, 303-313.

#### PRODUCT AVAILABILITY

IOTest CD7-PE Conjugated Antibody  
PN IM1429U – 2 mL Liquid – 20 µL / test\*.

PE is licensed under patent 4,520,110.

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

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(\*) : 20 µL is the quantity of product sufficient to stain

5 x 10<sup>5</sup> cells in a standard immunofluorescence assay