

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD10 antigen is referred to as the Common Acute Lymphoblastic Leukemia Antigen (CALLA) (1, 2). It is a type II integral membrane protein of 100 kDa, identified as the human membrane-associated neutral endopeptidase (EC3.4.24.11) (3, 4). It is expressed on uncommitted lymphoid precursors. CD10 expression is lost as cells enter the T lineage. In the B lineage, CD10 expression is lost later in ontogeny, as cells acquire surface Ig expression. It is also expressed on activated and proliferating B cells in the germinal center, and on neutrophils (6) as well as on bone marrow stromal cells. It is also expressed on a number of other cells of epithelial origin (5, 6).

The ALB1 monoclonal antibody was studied during the first International Workshop on Human Leucocyte Differentiation Antigens held in Paris, France, in 1984 (7).

REAGENT

IOTest CD10-PC7 Conjugated Antibody
PN A46527 – 1 mL Liquid – 10 µL/test*.

Clone	ALB1
Isotype	IgG1, mouse
Immunogen	Human leukemia cells
Hybridoma Source	NS1 x Balb/c Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	PC7 (Phycoerythrin-Cyanine 7)
Molar Ratio	PC7 / protein: 0.5 – 1.5
Fluorescence	PC7 (far red) Excites at 486 – 580 nm Emits at 750 – 810 nm
Buffer	2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.

STATEMENT OF WARNINGS

- 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.
- All specimens and samples must be considered as potentially infectious and

- must be handled with care (in particular: the wearing of protective gloves, gowns and goggles).
- Do not expose reagents to strong light during storage or incubation.
- Avoid microbial contamination of reagents or incorrect results might occur.
- Avoid contact of samples with skin mucosa and eyes. Never pipet by mouth
- Do not use reagent beyond the expiration date on the vial label.
- Let it come to room temperature (18 – 25°C) before use.
- Use general 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 PC7-labeled reagent (clear, slightly pink to redish 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.

PRECAUTIONS

Due to the tandem structure of the fluorochrome, PC7 also emits light at 575 nm. This secondary emission peak varies from lot-to-lot of PC7. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a PC7-conjugate.

SELECTED RESEARCH REFERENCES

- Shipp, M.A., Look, A.T., "Hematopoietic differentiation antigens that are membrane-associated enzymes: cutting is the key!", 1993, Blood, 82, 1052-1070.
- Lebien, T.W., McCormack, R.T., "The common acute lymphoblastic leukemia antigen (CD10) - Emancipation from a functional enigma", 1989, Blood, 73, 625-635.
- Letarte, M., Vera, S., Tran, R., Addis, J.B., Onizuka, R.J., Quackenbush, E.J., Jongeneel, C.V., McInnes, R.R., "Common acute lymphocytic leukemia antigen is identical to neutral

endopeptidase", 1988, J. Exp. Med., 168, 1247-1253.

- Shipp, M.A., Vijayaraghavan, J., Schmidt, E.V., Masteller, E.L., D'adamio, L., Hersh, L.B., Reinherz, E.L., "Common acute lymphoblastic leukemia antigen (CALLA) is active neutral endopeptidase 24.11 ("enkephalinase"): direct evidence by cDNA transfection analysis", 1989, Proc. Natl. Acad. Sci. USA., 86, 297-301.
- Braun, Martin, P.J., Ledbetter, J.A., Hansen, J.A., "Granulocytes and cultured human fibroblasts express common acute lymphoblastic leukemia-associated antigens", 1983, Blood, 61, 718-725.
- Metzgar, R.S., Borowitz, M.J., Jones, N.H., Dowell, B.L., "Distribution of common acute lymphoblastic leukemia antigen in nonhematopoietic tissues", 1981, J. Exp. Med., 154, 1249-1254.
- Boucheix, C., Perrot, J.Y., Mirshahi, M., Fournier, N., Billard, M., Giannoni, F., Bernadou, A., Rosenfeld, C., "Monoclonal antibodies against acute lymphoblastic leukemia differentiation antigens", 1984, Leucocyte Typing I, Bernard, A. et al., Springer Verlag, 671-672.

PRODUCT AVAILABILITY

IOTest CD10-PC7 Conjugated Antibody
PN A46527 – 1 mL Liquid – 10 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.

www.beckmancoulter.com.

TRADEMARKS

The BECKMAN COULTER logo, BECKMAN COULTER, IOTest are registered trademarks of Beckman Coulter, Inc.

Cy7 is a trademark of Amersham Biosciences, a GE Healthcare company

Manufactured by:
Immunotech SAS, a Beckman Coulter Company
130, avenue de Lattre de Tassigny, B.P. 177
13276 Marseille Cedex 9, France

©2007 Beckman Coulter, Inc.
All Rights Reserved

(*) : 10 µL is the quantity of product sufficient to stain
5 x 10⁵ cells in a standard immunofluorescence assay