

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 endo-peptidase (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 mAb was studied during the first International Workshop on Human Leucocyte Differentiation Antigens held in Paris, France, in 1984 (7).

REAGENT

IOTest CD10-ECD Conjugated Antibody
PN IM3608U – 1 mL Liquid – 10 µL / test*.

| | |
|---------------------|---|
| Clone | ALB1 |
| Isotype | IgG1, mouse |
| Immunogen | Human leukemia cells |
| Hybridoma | NS 1 x Balb/c spleen cells |
| Source | Ascites fluid |
| Purification | Ion exchange or affinity chromatography |
| Conjugation | Energy Coupled Dye (ECD): The Ig is conjugated to a tandem dye constituted of R-phycoerythrin covalently linked to Texas Red at 0.8-1 mole of ECD per mole of Ig. |
| Fluorescence | ECD (Red) Excites at 486–580 nm Emits at 610–635 nm |
| Buffer | 2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide. |

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. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection 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. Minimize exposure to light.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this ECD-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 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. Shipp, M.A., Look, AT., "Hematopoietic differentiation antigens that are membrane-associated enzymes: cutting is the key!", 1993, Blood, 82, 1052-1070.
2. Lebien, T.W., McCormack, R.T., "The common acute lymphoblastic leukemia antigen (CD10) - Emancipation from a functional enigma", 1989, Blood, 73, 625-635.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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-ECD Conjugated Antibodies
PN IM3608U – 1 mL Liquid – 10 µL / test*.

ECD is licensed under patent 4,520,104.

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

Outside the USA, contact your local Beckman Coulter representative.

www.beckmancoulter.com

TRADEMARKS

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

