

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 HLDA Workshop on Human Leucocyte Differentiation Antigens held in Paris, France, in 1984 (7).

REAGENT

IOTest CD10-APC-Alexa Fluor 700

Conjugated antibody

PN A86353 - 50 tests - Liquid - 10 µL/test*

Clone	ALB1
Isotype	IgG1, Mouse
Immunogen	Human Leukemia cells
Hybridoma	NS1 x spleen B cells
Source	Ascites fluid
Purification	Affinity chromatography
Conjugation	Allophycocyanin -Alexa Fluor 700 (APC-Alexa Fluor 700)
Molar Ratio	APC-Alexa Fluor 700 / Ig : 0.5 - 1.5
Fluorescence	Excites at 633/638 nm Emits at 720 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.

PRECAUTIONS

Due to the tandem structure of the fluorochrome, APC-Alexa Fluor 700 also emits light at 660 nm. This secondary emission peak varies from lot-to-lot of APC-Alexa Fluor 700. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a APC-Alexa Fluor 700-conjugate.

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.

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