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 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
NS1 x Balb/c

Source
Ascites fluid

Purification
Ion exchange or affinity chromatography

Conjugation
PC7

(Fluorescence)
Phycoerythrin-Cyanine 7

Molar Ratio
PC7 / protein: 0.5 – 1.5

PC7 (far red)
Excites at 486 – 580 nm
Emiss at 750 – 810 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. 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).
3. Do not expose reagents to strong light during storage or incubation.
4. Avoid microbial contamination of reagents or incorrect results might occur.
5. Avoid contact of samples with skin mucosa and eyes. Never pipet by mouth.
6. Do not use reagent beyond the expiration date on the vial label.
7. Let it come to room temperature (18 – 25°C) before use.
8. 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

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

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