

Monoclonal Antibody IOTest® CD45-Pacific Blue™

PN A74765 – 100 tests – Liquid – 10 µL/test* – Clone J.33

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD45 molecules are single chain integral membrane proteins, comprising at least 5 isoforms, ranging from 180 to 220 kDa. They are generated by alternative splicing combinations of three exons (A, B, and C) of the genomic sequence. The non-restricted CD45 antigen, Leucocyte Common Antigen (LCA) consists of an extracellular sequence, proximal to the membrane, which is common to all CD45 isoforms. All the monoclonal antibodies that belong to the CD45 cluster react with this part of the antigen and are able to recognize all CD45 isoforms. These isoforms have extracytoplasmic sequences ranging from 391 to 552 amino acids long, with numerous N-linked carbohydrate attachment sites. The cytoplasmic portion contains two phosphotyrosine-phosphatase domains. The non-restricted CD45 epitope is present on the surface of all human leucocytes; lymphocytes, eosinophils monocytes, basophils and neutrophils, by order of decreasing level of expression. CD45 is a major component of the lymphocyte membrane. It is absent from erythrocytes and platelets. It is lost during maturation of erythroid cells in the bone marrow. CD45 antibodies react with leucocyte progenitors in bone marrow (1).

The J.33 monoclonal antibody binds to all the CD45 isoforms present on human leucocytes.

The J.33 monoclonal antibody has been assigned to the CD45 cluster of differentiation at the 3rd HLDA Workshop on Human Leucocyte Differentiation Antigens in Oxford, U.K. (1986) (2).

J.33 was assigned to CD45 cluster in HLDA 3 under the name I.33 (antibody # 818).

REAGENT

IOTest CD45-Pacific Blue
Conjugated antibody
PN A74765 - 100 tests - Liquid - 10 µL/test*
Clone J.33
Isotype IgG1 kappa, Mouse
Immunogen Laz 221 cell line
Hybridoma NS1 x spleen B cells
Source Ascites fluid
Purification Protein A affinity chromatography
Conjugation Pacific Blue
Molar Ratio Pacific Blue / Ig : 5.6 - 7.0
Fluorescence Excites at 405 nm
Emits at 455 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 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.

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. Serra-Pages, C., Morimoto, C., Schlossman, S.F., Saito, H., Streuli, M., "Characterization of CD45 mAb", 1995, Leucocyte Typing V, White Cell Differentiation Antigens. Schlossman, S.F., et al., Eds., Oxford University Press, 389-391.
2. Cobbold, S., Hale, G., Waldmann, H., "Non-lineage, LFA-1 family, and leukocyte common antigens: new and previously defined clusters", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, McMichael A.J., et al., Eds., Oxford University Press, 788-803.

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