

Monoclonal Antibody IOTest® CD33-PC5.5

PN A70198 - 50 tests - Liquid - 10 µL/test* - Clone D3HL60.251

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

CD33 is a 67 kDa single chain transmembrane glycoprotein also designed gp67 (1). The gp67 genomic locus was mapped to the long arm of chromosome 19 (2). CD33 is the smallest member of a structurally related group of immunoglobulin-superfamily proteins, showing sialic acid binding properties, and called the sialoadhesin family (3).

Members of the sialoadhesin family such as CD22, myelin associated glycoprotein (MAG), Schwann cell myelin protein (SMP) and CD33, are probably involved in the mediation of cell-cell adhesion. CD33 may specifically play a role in the development of myeloid cells in bone marrow (3).

The CD33 differentiation antigen is expressed by hematopoietic progenitor cells on colony-forming units for granulocytes, erythrocytes, monocytes and megakaryocytes (CFU-GEMM) (4). It is also present on progenitors of granulocytes and mononuclear phagocytes (CFU-GM) but also on early erythroid progenitors (BFU-E) (4).

The D3HL60.251 monoclonal antibody (mAb) reacts with cells of myeloid origin. It reacts strongly on monocytes, and weakly on granulocytes of the peripheral blood but not with mature lymphoid cells or lymphoid precursors.

The D3HL60.251 mAb has been assigned to the CD33 cluster of differentiation at the 4th International Workshop on Human Leucocyte Differentiation Antigens in Vienna, Austria, in 1989 (5).

REAGENT

IOTest CD33-PC5.5 Conjugated Antibody
PN A70198 - 50 tests - Liquid - 10 µL/test*

Clone	D3HL60.251
Isotype	IgG1 kappa, Mouse
Immunogen	HL-60
Hybridoma	NS1 x Balb/c
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	R Phycoerythrin-Cyanin 5.5 (PC5.5)
Molar Ratio	PC5.5 / Ig : 0.5 - 1.5
Fluorescence	Excites at 488 nm Emits at 692 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.

PRECAUTIONS

Due to the tandem structure of the fluorochrome, PC5.5 also emits light at 575 nm. This secondary emission peak varies from lot-to-lot of PC5.5. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a PC5.5-conjugate.

SELECTED RESEARCH REFERENCES

1. Peiper, S.C., Leboeuf, R.D., Hughes, C.B., Prasthofer, E.F., Borowitz, M.J., Dewutter-Dambuyant, C., Katz, D.R., Walker, W.S., Ashmun, R.A., Look, A.T., "Report on the CD33 cluster workshop: Biochemical and genetic characterization of gp67", 1989, Leucocyte Typing IV, White Cell Differentiation Antigens. W. Knapp, et al., Eds., Oxford University Press, 814-816.

2. Peiper, S.C., Ashmun, R.A., Look, A.T., "Molecular cloning, expression and chromosomal localization of a human gene encoding the CD33 myeloid differentiation antigen", 1988, Blood, 72, 314-321.
3. Kelm, S., Schauer, R., Crocker, P.R., "The sialoadhesins - a family of sialic acid-dependent cellular recognition molecules within the immunoglobulin superfamily", 1996, Glycoconjugate J., 13, 913-926.
4. Peiper, S.C., Andrews, R.G., "CD33 cluster workshop report", 1995, Leucocyte Typing V, White Cell Differentiation Antigens Schlossman, S.F., et al., Eds., Oxford University Press, 837-840.
5. Köller, U., Peschel, CH., "Cluster report: CD33", 1989, Leucocyte Typing IV, White Cell Differentiation Antigens. W. Knapp, et al., Eds., Oxford University Press, 812-813.

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MANUFACTURED BY :

IMMUNOTECH SAS
a Beckman Coulter Company
130, avenue de Lattre de Tassigny
B.P. 177 - 13276 Marseille Cedex 9
France

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

Outside the USA, contact your local Beckman Coulter representative.

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

