IOTest® CD33-PC7

PN A54824 – 1 mL 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-PC7 Conjugated Antibody
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Clone	D3HL60.251
Isotype	IgG1, Mouse
Immunogen	HL60 cell line
Hybridoma	Myeloma NS1 x Balb/c
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	PC7 (Phycoerythrin-Cyanine 7)
Molar Ratio	PC7 / protein: 0.5 – 1.5
Fluorescence	
PC7 (far red)	Excites at 486 – 580 nm Emits 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 multicolor analysis, the compensation matrix should be carefully checked when changing the lot of a PC7-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 superfamiliy", 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.

PRODUCT AVAILABILITY

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TRADEMARKS

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