IOTest® CD34-ECD

PN IM2709U – 1 mL Liquid – 10 µL / test* – Clone 581

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD34 glycoprotein is a transmembrane single chain molecule. Its molecular weight is about 110 kDa. The extracellular domain is heavily N- and O-glycosylated (1-4) and the cytoplasmic sequence reveals two sites for activated protein kinase C phosphorylation and one site for tyrosine phosphorylation (3). This antigen is the earliest known marker in human for hematopoietic progenitor cells (5, 6). CD34 is expressed on virtually all hematopoietic precursor cells (7), including the multipotent stem cells (8). However, the CD34 glycoprotein expression is not restricted to hematopoietic progenitors (9) and has been detected on capillary endothelial cells (9, 10), and on bone marrow stromal cells and their precursors (11).

There are three classes of CD34 epitopes defined by differential sensitivity to enzymatic cleavage with glycoprotease from Pasteurella haemolytica and with neuraminidase (4). The 581 monoclonal antibody (mAb) recognizes specifically a class III epitope, neuraminidase- and glycoprotease-resistant (12, 13).

This 581 mAb has been assigned to the CD34 cluster of differentiation at the 5th International Workshop on Human Leukocyte Differentiation Antigens in Boston, USA, in 1993 (12).

REAGENT

IOTest CD34-ECD Conjugated Antibody

PN IM2709U – 1 mL Liquid – 10 µL / test*.

Clone 581
Isotype IgG1
Species Mouse
Immunogen Human $CD34^+$ cells.
Hybridoma NS0 x Balb/c
Source Ascites fluid
Purification Ion exchange or affinity chromatography
Conjugation ECD: The Ig is conjugated to a tandem dye constituted of R-phycoerythrin covalently linked to texas red at 0.8-1 mole of ECD per mole of Ig.
Excitation wavelength: 488 nm
Maximum emission wavelength: 613 nm
Main emission color: Red
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. 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. Minimize exposure to light.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this ECD-labeled reagent (clear, colorless to pinkish 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.

SELECTED RESEARCH REFERENCES

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12. Greaves, M.F., Titley, I., Colman, S.M., Bühring, H.-J., Campos, L., Castoldi, G.L., Garrido, F., Gaudernack, G., Girard, J.-P., Inglès-Esteve, J., Invernizzi, R., Knapp, W., Lansdorp, P.M., Lanza, F., Merle-Béral, H., Parravicini, C., Razak, K., Ruiz-Cabello, F., Springer, T.A., van der Schoot, C.E., Sutherland, D.R., "CD34 cluster Workshop report", 1995, Leucocyte Typing V, White Cell

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

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BECKMAN COULTER

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PRODUCT AVAILABILITY

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ECD is licensed under patent 4,520,104.

For additional information in the USA, call 800-526-7694.
Outside the USA, contact your local Beckman Coulter representative.

www.beckmancoulter.com

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