

Monoclonal Antibody IOTest[®] CD31-PE

PN IM2409- 100 tests – Liquid - 20 µL/test - Clone 1F11

For Research Use Only. Not for use in diagnostic procedures.

SPECIFICITY

The CD31 antigen, also called Platelet Endothelial Cell Adhesion Molecule-1 (PECAM-1) and platelet gpIIa, is a single-chain membrane glycoprotein of 140 kDa, having Ig-like extracellular domains and an overall structure of cell adhesion molecules (1, 2).

It is present on platelets, endothelial cell junctions, stem cells of the myeloid lineage, monocytes, granulocytes, B cells and a T cell subset (CD45RA⁺ population of CD4⁺ cells) (3 – 6).

It is reported to be an endothelial adhesion molecule (1, 2).

The 1F11 monoclonal antibody was evaluated during the Vth International Workshop on Human Leukocyte Differentiation Antigens (7).

REAGENT

IOTest CD31-PE Conjugated Antibody
PN IM2409 - 100 tests - Liquid - 20µL/test

Clone	1F11
Isotype	IgG1, Mouse
Immunogen	Jurkat T cell line
Hybridoma	Myeloma x Balb/CJ spleen cells
Source	Ascitic fluid
Purification	Protein A affinity
Conjugation	R Phycoerythrin (PE)
Molar Ratio	PE / Ig : 0.5 - 1.5
Fluorescence	Excites at 488 nm Emits at 575 nm

REAGENT CONTENTS

This antibody is provided in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin.

APPLICATION

Flow cytometry.

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.

PROCEDURE

This reagent is designed for Flow Cytometry. Assay volume: 20 µL per 5 x 10⁵ cells in one test, or per 100 µL whole blood.

SELECTED RESEARCH REFERENCES

1. Newman, P.J., Berndt, M.C., Gorski, J., White II, G.C., Lyman, S., Paddock, C., Muller, W.A., "PECAM-1 (CD31) cloning and relation to adhesion molecules of the immunoglobulin gene superfamily", 1990, *Science*, 247, 1219-1222.
2. DeLisser, H.M., Newman, P.J., Albelda, S.M., "Molecular and functional aspects of PECAM-1/CD31", 1994, *Immunol. Today*, 15, 490-495.
3. Torimoto, Y., Rothstein, D.M., Dang, N.H., Schlossman, S.F., Morimoto, C., "CD31, a novel cell surface marker for CD4 cells of suppressor lineage, unaltered by state of activation", 1992, *J. Immunol.*, 148, 388-396.
4. Morimoto, C., Schlossman, S.F., "Human naive and memory T cells revisited: new markers (CD31 and CD27) that help define CD4⁺ T cell subsets", 1993, *Clin. Exp. Rheumatol.*, 11, 241-247.

5. Ashman, L.K., Aylett, G.W., "Expression of CD31 epitopes on human lymphocytes: CD31 monoclonal antibodies differentiate between naive (CD45RA⁺) and memory (CD45RA⁻) CD4-positive T cells", 1991, *Tissue Antigens*, 38, 208-212.
6. Sugita, K., Soiffer, R.J., Murray, C., Schlossman, S.F., Ritz, J., Morimoto, C., "The phenotype and reconstitution of immunoregulatory T cell subsets after T cell-depleted allogeneic and autologous bone marrow transplantation", 1994, *Transplantation*, 57, 1465-1473.
7. Newman, P.J., Paddock, C., "CD31 cluster workshop report", 1995, in *Leucocyte Typing V*, Schlossman, S.F., et al., Eds., Oxford University Press, p. 1259-1265.

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