IOTest® CD29-FITC

PN IM0791U – 2 mL Liquid – 20 µL / test* – Clone K20

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD29 antigen is a transmembrane glycoprotein of 110 kDa, known as the β-1 integrin that forms non-covalent pairs with α integrin subunits (α1-α8 and αv) (1, 2). CD29 complexes are involved in cell-cell and cell-matrix adhesion, depending on the α subunit associated to CD29 (3, 4). The cellular distribution of CD29 is summarized in ref. 1.
The K20 monoclonal antibody (mAb) has been first reported as specific for a glycoprotein complex preferentially expressed on early hematopoietic cells (5). Previously assigned, as antibody No. T63, to the CDw26 cluster of differentiation at the 2nd International Workshop on Human Leucocyte Differentiation Antigens (HLDA) in Boston, U.S.A., in 1984 (6), K20 was finally assigned, as antibody No. 82/139 to the CD29 cluster of differentiation at the 3rd International Workshop on HLDA in Oxford, England, in 1986 (7, 8). The K20 mAb has been further used as a CD29 reference antibody with code "Ref.12" (1, 9).

REAGENT

IOTest CD29-FITC Conjugated Antibody
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Clone	K20
Isotype	IgG2a, mouse
Immunogen	Cells from a T-cell lymphoma
Hybridoma	NS1 x Biozzi spleen cells
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	FITC (Fluorescein isothiocyanate) is conjugated at 4 – 9 moles of FITC per mole of Ig.
Fluorescence	FITC (Green) Excites at 468 – 509 nm Emits at 504 – 541 nm

REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline, with 0.1% sodium azide (NaN_3) as preservative, and 2.0 mg / mL bovine serum albumin (BSA).

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. Do not use antibody beyond the expiration date on the label.
3. Samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
4. Never pipet by mouth and avoid contact of samples with skin and mucous membranes
5. Minimize exposure of reagent to 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 FITC-labeled reagent (clear, colorless to yellowish-green liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

REAGENT PREPARATION

No preparation 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. Tanaka, Y., Aso, M., Takada, Y., "CD29 Workshop Panel report", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 357-360.
2. Pischel, K.D., Bluestein, H.G., Woods, V.L. Jr., "Platelet glycoproteins Ia, Ic and IIa are physicochemically indistinguishable from the very late activation antigens adhesion-related proteins of lymphocytes and other cell types", 1988, J. Clin. Invest., 81, 505-513.
3. Hemler, M.E., Lobb, R.R., "The leukocyte β1 integrins", 1995, Curr. Opin. Hematol., 2, 61-67.
4. Hynes, R.O., "Integrins: Versatility, modulation, and signaling in cell adhesion", 1992, Cell, 69, 11-25.
5. Amiot, M., Bernard, A., Tran, H.C., Leca, G., Kanellopoulos, J.M., Boumsell, L., "The human cell surface glycoprotein complex (gp 120, 200) recognized by monoclonal antibody K20 is a component binding to phytohaemagglutinin on T cells", 1986, Scand. J. Immunol., 23, 109-118.
6. Knowles, R.W., "Immunochemical analysis of the T-cell-specific antigens", 1986, Leucocyte Typing II, 1, Human T lymphocytes, Reinherz, E.L., et al., Eds., Springer-Verlag, 260-288.
7. McMichael, A.J., Gotch, F.M., "T-cell antigens: New and previously defined clusters", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, McMichael A.J., et al., Eds., Oxford University Press, 31-62.
8. Zutter, M. M.,, "Immunohistochemistry of adhesion structure subpanel 6 mAb to β1 (CD29/CD49) integrins", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 1621-1628.
9. Miyasaka, M., Tanaka, T., Goda, K., Takeuchi, E., "Adhesion structures: Section report", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 333-342.

PRODUCT AVAILABILITY

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