IOTest® CD11a-PE

PN IM1433U – 2 mL Liquid – 20 µL / test* – Clone 25.3

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

CD11a (αL integrin, LFA-1α chain) is a member of the integrin family. Like other leucocyte integrins (CD11b, CD11c, CD11d), CD11a is non-covalently associated with the β2 integrin subunit CD18 (1, 2). CD11a is a transmembrane glycoprotein of 170 kDa, mainly expressed by leucocytes including monocytes, macro-phages, neutrophils, eosinophils, basophils, B and T lymphocytes (3). Activated platelets also express CD11a and CD18 (4).

LFA-1 (CD11a / CD18) promotes homotypic adhesion between lymphoid cells and heterotypic adhesion of leucocytes to the vascular endothelium (5, 6). LFA-1's known ligands are intercellular adhesion molecules (ICAM): ICAM-1 (CD54), ICAM-2 (CD102) and ICAM-3 (CD50) (7).

The 25.3.1 monoclonal antibody has been assigned to the CD11a cluster of differentiation at the 4th International Workshop on Human Leucocyte Differentiation Antigens in Vienna, Austria, in 1989 (WS Code: N213) (8).

REAGENT

IOTest CD11a-PE Conjugated Antibody
PN IM1433U – 2 mL Liquid – 20 µL / test*.

Clone	25.3
Isotype	IgG1, mouse
Immunogen	Cytotoxic clone anti-class II (Tm – 20)
Hybridoma	X63-Ag8.653 x Balb/c
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	R-phycoerythrin (PE) is conjugated at 0.5 – 1.5 moles of PE per mole of Ig.
Fluorescence	PE (orange-red) Excites at 486–580 nm Emits at 568 – 590 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 PE-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 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. Sanchez-Madrid, F., Krensky, A.M., Ware, C.F., Robbins, E., Strominger, J.L., Burakoff, S.J., Springer, T.A., "Three distinct antigens associated with human T-lymphocyte-mediated cytolysis : LFA-1, LFA-2 and LFA-3", 1982, Proc. Natl. Acad. Sci. USA, 79, 7489-7493.
2. Hogg, N., "CD11a Workshop panel report", 1997, Leucocyte Typing VI,, White cell Differentiation Antigens, Kishimoto, T., et al., Eds., Garland Publishing, Inc., 343-345.
3. Petruzelli, L., Huang, C., Springer, T.A., "CD11a cluster report", 1995, Leucocyte Typing V, White Cell Differentiation Antigens. Schlossman, S.F., et al., Eds., Oxford University Press, 1586-1587.
4. Philippeaux, M.M., Vesin, C., Tacchini-Cottier, F., Piguet, P.F., "Activated human platelets express β2 integrin", 1996, Eur. J. Haematol., 56, 130-137
5. Springer, T.A., Dustin, M.L., Kishimoto, T.K., Marlin, S.D., "The lymphocyte function-associated LFA-1, CD2, and LFA-3 molecules : cell adhesion receptors of the immune system", 1987, Annu. Rev.Immunol, 5, 223-252.
6. Ortlepp, S., Stephens, P.E., Hogg, N., Figdor, C.G., Robinson, M.K., "Antibodies that activate beta2 integrins can generate different ligand binding states", 1995, Eur. J. Immunol., 25, 637-643.
7. Marlin, S.D., Springer, T.A., Purifier intercellular adhesion molecule-1 (ICAM-1) is a ligand for lymphocyte function-associated antigen 1 (LFA-1), 1987, Cell, 51, 813-819.
8. Uciechowski, P., Schmidt, R.E., "Cluster report : CD11", 1989, Leucocyte Typing IV, White Cell Differentiation Antigens, 543-551.

PRODUCT AVAILABILITY

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PE is licensed under patent 4,520,110.

For additional information in the USA, call 800-526-7694.
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(*): 20 µL is the quantity of product sufficient to stain 5×10^5 cells in a standard immunofluorescence assay