IOTest® CD11b-PE

PN IM2581U – 2 mL Liquid – 20 µL / test* – Clone Bear1

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD11b antigen is also refered to under several other names i.e.: αM integrin chain, Mac-1, CR3, iC3bR, or Mo1 (1, 2). It is a type I integral transmembrane glycoprotein of 170 / 165 kDa under reducing / non reducing conditions, respectively. The CD11b antigen shows 19 potential N-glycosylation sites (1).

Expression of the CD11b chain on the cell surface requires the presence of the CD18 antigen (also known as β2 integrin chain). Together, these two subunits create the CD11b/CD18 integrin, one of the four integrin heterodimers that can be built by the association of CD18β chain with four distinctive CD11α chains. The CD11b/CD18 integrin is also called Mac-1 or αMβ2.

The CD11b/CD18 integrin has broad ligand-binding capabilities. It can bind CD23, CD54 (ICAM-1), CD102 (ICAM-2), ICAM-4, the complement component iC3b, fibrinogen, and LPS/LBP (complex of lipopoly-saccharide (LPS) and LPS-binding protein), among other ligands (1). There are also evidences of intramembrane interactions of CD11b/CD18 with GPI-anchored surface molecules such as CD16 or CD14 (3). These interactions may account for trans-membrane signaling and effector functions of GPI-linked membrane receptors.

CD11b/CD18 is highly expressed on NK cells, neutrophils, monocytes and macrophages.

The Bear1 monoclonal antibody was studied during the 5th International Workshop on Human Leucocyte Differentiation Antigens (HLDA) in Boston, USA, in 1993 (WS Code: S141, Section AS). It has been assigned to the CD11b cluster of differentiation at the 6th International HLDA Workshop in Kobe, Japan, in 1996 (WS Code: A015, Section AS) (1).

REAGENT

IOTest CD11b-PE Conjugated Antibody
PN IM2581U – 2 mL Liquid – 20 µL / test*.

Clone	Bear1
Isotype	IgG1, mouse
Immunogen	Purified human monocytes
Hybridoma	SP2/0-Ag14 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. Hogg, N., "CD11b workshop panel report", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al., Eds., Garland Publishing, Inc., 345-347.
2. Morimoto, C., "Activation antigens: section report", 1995, Leucocyte Typing V, White Cell Differentiation Antigens. Schlossman, S.F., et al., Eds., Oxford University Press, 1097-1104.
3. Petty, R., Todd III, R.F., "Integrins as promiscuous signal transduction devices", 1996, Immunol. Today, 17, 209-212.

PRODUCT AVAILABILITY

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PE is licensed under patent 4,520,110.

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

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