

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

### SPECIFICITY

The CD11b antigen is also referred to under several other names i.e.:  $\alpha$ M 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  $\beta$ 2 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 CD18 $\beta$  chain with four distinctive CD11 $\alpha$  chains. The CD11b/CD18 integrin is also called Mac-1 or  $\alpha$ M $\beta$ 2.

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-PC5 Conjugated Antibody  
PN IM3611 – 100 tests – Liquid –  
10 µL / test.

<b>Clone</b>	<b>Bear 1</b>
<b>Isotype</b>	IgG1 mouse
<b>Immunogen</b>	Purified human monocytes
<b>Hybridoma</b>	SP2/0-Ag 14 x Balb/c spleen cells
<b>Source</b>	Ascites fluid
<b>Purification</b>	Ion exchange or affinity chromatography
<b>Conjugation</b>	R-phycoerythrin-Cyanine 5 (PC5)
<b>Molar Ratio</b>	PC5 / Ig : 0.5 – 1.5
<b>Fluorescence</b>	Excites at 486–580 nm Emits at 660–680 nm

### REAGENT CONTENTS

This antibody is provided in phosphate-buffered saline pH 7.4, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin.

### APPLICATION

Flow cytometry.

### 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 in the dark. 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. A wash is required to yield optimal results. Assay volume: 10 µL per 5 x 10<sup>5</sup> cells in one test, or per 100 µL whole blood.

### 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.

### TRADEMARKS AND PATENTS

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