PN IM3450 CD161-PE (191B8)

50 tests
20 µL / test

IOTest®
Conjugated Antibodies

For Research Use Only. Not For Use In Diagnostic Procedures.

SPECIFICITY

The CD161 / NKR-P1A antigen is a type II integral transmembrane protein expressed as a monomer of 44 kDa or as a disulphide-linked homodimer of 80 kDa (1, 2). The carboxy-terminal extracellular domain is homologous to the Ca^{++}–dependent (C-type) lectin superfamily (3). CD161 is an activatory NK-cell receptor. In contrast with other NK receptors such as the killer-cell-inhibitory-receptors (KIR) / killer-cell-activatory-receptors (KAR) of the Ig-superfamily type (p58, p70, p140) and CD94 / NKG2A, the CD161-mediated activation is not HLA-dependent.
CD161 is expressed on all peripheral blood NK cells, on sub-populations of peripheral blood T lymphocytes (2, 4) and on a fraction of early immature $CD2^-CD3^-$ thymocytes (1).
The 191B8 monoclonal antibody (mAb) specifically reacts with the CD161 / NKR-P1A antigen (1). The 191B8 mAb has been assigned to the CD161 cluster of differentiation at the 6th International Workshop on Human Leucocyte Differentiation Antigens in Kobe, Japan, in 1996 (2).

REAGENT

Clone	191B8
Isotype	IgG2a, mouse
Immunogen	NK cells
Hybridoma	P3U1 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. Excitation wavelength: 488 nm Maximum emission wavelength: 575 nm Main emission color: Orange-red
Buffer	2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.

APPLICATION

Flow cytometry (1, 2, 4)

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.

STORAGE CONDITIONS AND STABILITY

Each reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. Minimize exposure to light.

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.

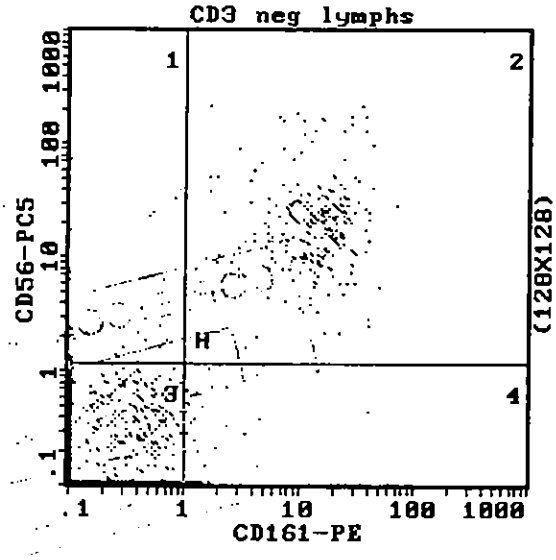
PROCEDURE

This reagent is designed for flow cytometry.
Assay volume: 20 µL per 5×10^5 cells in one test, or per 100 µL whole blood.
A wash is required to yield optimal results.

EXAMPLE DATA

The graphs below are biparametric representations (Fluorescence Intensity versus Fluorescence Intensity) of a lyzed normal whole blood sample. The staining is performed with a combination of 3 reagents CD3-FITC, CD161-PE and CD56-PC5 (PN IM1281, PN IM3450 and PN IM2654, respectively). The gating is done on CD3 negative lymphocytes.

Figure 1: Acquisition with a COULTER® EPICS® XL™ flow cytometer. Analysis with the XL SYSTEM II™ software.



3450EX221298 Vers. 01/ 22/12/98 AC-98289

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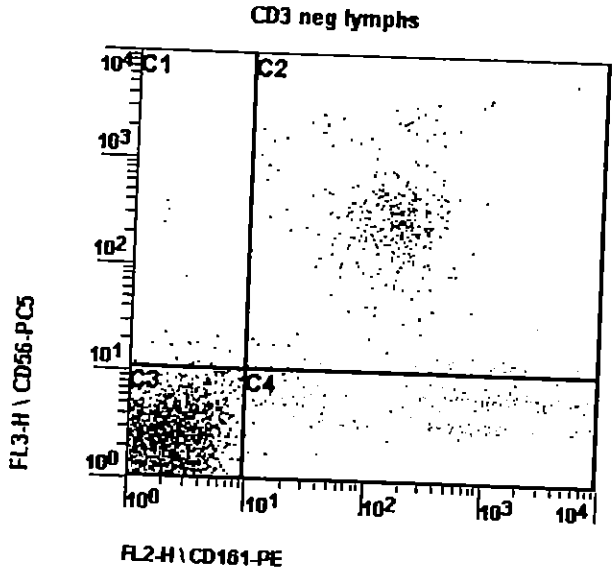
Figure 2: Acquisition with a Becton Dickinson FACScan™ flow cytometer equipped with the LYSYS II™ software. Analysis with EXPO™ (v 2.0) Analysis software (Beckman Coulter PN 6605433).



SELECTED RESEARCH REFERENCES

1. [3242] Poggi, A., Costa, P., Morelli, L., Cantoni, C., Pella, N., Bias-soni, R., Nanni, L., Revello, V., Tomasello, E., Mingari, M.C., Moretta, A., Moretta, L., "Expression of human NKRP1A by CD34+ immature thymocytes: NKRP1A-mediated regulation of proliferation and cytolytic activity", 1996, Eur. J. Immunol., 26, 2-8.
2. [4877] Poggi, A., Revello, V., Nanni, L., Costa, P., Moretta, L., "CD161 (human NKR-P1A) Workshop panel report", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al., Eds., Garland Publishing, Inc., 307-312.
3. [4858] Yokoyama, W.M., "Natural Killer cell receptors", 1998, Curr. Opin. Immunol., 10, 298-305.
4. [4876] Ida, H., Morita, C.T., Porcelli, S.A., Anderson, P., "CD161 Workshop: Reactivity of Workshop natural killer cell monoclonal antibodies on fresh and interleukin 2-activated peripheral blood natural killer cells and CD4-negative CD8-negative αβ and γδ T-cell clones", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al., Eds., Garland Publishing, Inc., 313-317.

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