

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD244 antigen, also called 2B4, is a 38 kDa cell surface signal transduction molecule found on almost all human NK-cells (1-2).

It induces a granule-independent killing mechanism by NK effector cells.

It is also found on γ/δ TCR T-cells and approximately half of peripheral α/β TCR CD8⁺ T-cells.

It is not found on B or naive CD8⁺ T-cells.

Upon activation, most CD8⁺ T-cells become CD244 positive.

However, a small but significant minority of CD8⁺ T-cells remain CD244 negative. This subset is associated with lower cytotoxic activity, lower IFN γ production and higher IL-4/IL-10 production.

CD244 is a high affinity receptor for CD48.

Therefore, this monoclonal antibody may be useful in defining subsets of CD8⁺ T-cells and investigating a novel cytotoxic mechanism on NK-cells.

The C1.7 mAb was assigned to the CD244 cluster of differentiation at the 7th International Workshop on Human Leucocyte Differentiation Antigens in Harrogate, United Kingdom, in 2000 (3).

REAGENT

IOTest CD244 (2B4)-PC5.5
Conjugated Antibody
PN B21171 - 0.5 mL - Liquid

Clone	C1.7
Isotype	IgG1, Mouse
Immunogen	Cultured human NK cells
Hybridoma	X63 x balb/c
Source	Ascites fluid or supernatant of in vitro cultured hybridoma cells.
Purification	Affinity chromatography
Conjugation	R Phycoerythrin-Cyanine 5.5 (PC5.5)
Molar Ratio	PC5.5 / Ig : 0.5 - 1.5
Fluorescence	Excites at 488 nm Emits at 692 nm

REAGENT CONTENTS

This antibody is provided in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin. Concentration: See lot specific Certificate of Analysis at www.beckmancoulter.com.

STATEMENTS OF WARNING

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 considered potentially infectious and disposed of with proper precautions.
3. Never pipet with 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 AND HANDLING CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

PRECAUTIONS

Due to the tandem structure of the fluorochrome, PC5.5 also emits light at 575 nm. This secondary emission peak varies from lot-to-lot of PC5.5. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a PC5.5-conjugate.

SELECTED RESEARCH REFERENCES

1. Valiante, N.M., Trinchieri, G. "Identification of a novel signal transduction surface molecule on human cytotoxic lymphocytes", 1993, J. Exp. Med., 178, 1397-1406.

2. Mathew, S.O., Kumaresan, P.R., Lee, J.K., Huynh, V.T., Mathew, P.A., "Mutational analysis of the human 2B4 (CD244)/CD48 interaction: Lys68 and Glu70 in the V domain of 2B4 are critical for CD48 binding and functional activation of NK cells", 2005, J.Immunol., 175, 1005-1013.
3. Pascal, V. Vivier, E. André, P. "CD244 (B24): New CD report", Leucocyte Typing VII, White Cell Differentiation Antigens. Mason, D. et al., Eds., Oxford University Press, 2002, 424-425

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MANUFACTURED BY :

IMMUNOTECH SAS
a Beckman Coulter Company
130, avenue de Latre de Tassigny
B.P. 177 - 13276 Marseille Cedex 9
France

For additional information, or if damaged product is received, call Beckman Coulter Customer Service at 800-526-7694 (USA or Canada) or contact your local Beckman Coulter Representative.

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