Monoclonal Antibody IOTest® CD7-APC-Alexa Fluor® 700

PN A70201 - 50 tests - Liquid - 10 µL/test* - Clone 8H8.1

Analyte Specific Reagent.
Analytical and performance characteristics are not established.

SPECIFICITY

The CD7 antigen is a membrane-embedded glycoprotein with a molecular weight of 40 kDa (1). The extracellular region of the molecule is composed by a single immunoglobulin-like domain, and an extracellular sequence able to be O-glycosylated. The intracytoplasmic tail interacts with the lipid kinase phosphatidylinositol 3-kinase (PI3-kinase) (2). The CD7 molecule is expressed at an early stage of T lineage ontogeny, during the extrathymic prothymocytic formation. CD7 expression persists throughout T-lymphocytes differentiation defining thus CD7 as a pan-T marker (1, 3, 4). The CD7 glycoprotein is also expressed on thymocytes, on the majority of resting T-lymphocytes, and Natural Killer cells (NK), and on a subset of pre-B lymphocytes and B lymphocytes from foetal bone marrow (1, 5). CD7 expression is also detected on pluripotent hematopoietic stem cells (1).
Mature B-lymphocytes, cells from erythroid, myeloid and megacaryocytic lineage does not express the CD7 molecule (1, 6).
The CD7 molecule is involved in T lymphocytes activation (1). Its expression may be quantitatively up-regulated on stimulated T lymphocytes (1, 6).
The 8H8.1 monoclonal antibody has been assigned to the CD7 cluster of differentiation during the 2nd International Workshop on Human Leucocyte Differentiation Antigens in Boston, USA, in 1984 (7).

REAGENT

IOTest CD7-APC-Alexa Fluor 700 Conjugated Antibody
PN A70201 - 50 tests - Liquid - 10 µL/test*

Clone	8H8.1
Isotype	IgG2a kappa, Mouse
Immunogen	Thymocytes
Hybridoma	X63 x spleen B cells
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	Allophycocyanin - Alexa Fluor 700 (APC-Alexa Fluor 700)
Molar Ratio	APC-Alexa Fluor 700 / Ig : 0.5 - 1.5
Fluorescence	Excites at 633 nm Emits at 702 nm

REAGENT CONTENTS

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

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 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. 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.

PRECAUTIONS

Due to the tandem structure of the fluorochrome, APC-Alexa Fluor 700 also emits light at 660 nm. This secondary emission peak varies from lot-to-lot of APC-Alexa Fluor 700. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a APC-Alexa Fluor 700-conjugate.

SELECTED RESEARCH REFERENCES

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3. Civin, C.I., Gore, S.D., "Antigenic analysis of hematopoiesis : a review", 1993, J. Hematotherapy, 2, 137-144.
4. Mossalayi, D., Dalloul, A.H., Bertho, J.M., Lecron, J.C., De Laforest, P.G., Debre, P., "In vitro differentiation and proliferation of purified human thymic and bone marrow CD7+CD2- T-cell precursors", 1990, Exp. Hematol., 18, 326-331.
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6. Lazarovits, A.I., Colvin, R.B., Camerini, D., Karsh, J., Kurnick, J.T., "Modulation of CD7 is associated with T-lymphocyte function", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, A.J. McMichael, 219-223.
7. Palker, T.J., Scearce, R.M., Hensley, L.L., Ho, W., Haynes, B.F., "Comparison of the CD7 (3A1) group of T cell workshop antibodies", 1985, Leucocyte Typing II, Human T lymphocytes, Reinherz, E.L., et al. Eds., 303-313.

TRADEMARKS AND PATENT

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Outside the USA, contact your local Beckman Coulter representative.

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Printed in France.
Made in France.

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

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