IOTest CD197 (CCR7)-PC7

PN B46025 – 0.5 mL – Liquid – Clone G043H7

Analyte Specific Reagent.
Analytical and performance characteristics are not established

IOTest

CD197 (CCR7)-PC7

PN B46025

Conjugated Antibody
Liquid - 0.5 mL

Specifications	
Clone	G043H7
Hybridoma	ND
Immunogen	CCR7-transfected cells
Isotype	IgG2a
Species	Mouse
Source	Purified
Purification	Affinity chromatography
Fluorochrome	R Phycoerythrin-Cyanine 7 (PC7)
Molar ratio	PC7 / Ig: 0.5 - 1.5
λ excitation	488 nm
Emission Peak	770 nm
Buffer	PBS pH 7.2 plus 2 mg / mL BSA and 0.1% NaN_3

SPECIFICITY

Clone G043H7 recognizes the C-C chemokine receptor type 7 (CCR7), also known as CD197, on T, B, NK, and dendritic cells.
CCR7 is G protein-coupled receptors (GPCR) with seven transmembrane receptors. It binds CCL19 and CCL21. CCR7 and its ligands link innate and adaptive immunity through their effects on interactions between T cells and dendritic cells. The chemokine receptor CCR7 plays a pivotal role in the homing of naïve T cells and regulatory T cells to secondary lymphoid organs, and the migration of dendritic cells into afferent lymphatic vessels (1, 2). Naïve T cells enter the lymph node through high endothelial venules, which express CCL21. Dendritic cells and macrophages enter the lymph node through afferent lymphatics. The encounter of T cells and dendritic cells in the T cell zone is CCR7-dependent (3). In addition, during immunological surveillance, B lymphocytes recirculate between B-cell-rich compartments (follicles or B zones) in secondary lymphoid organs, surveying for antigen. After antigen binding, B cells move to the boundary of B and T zones to interact with T-helper cells; this B cell migration is directed by CCR7 and its ligands. CCR7-positive cancer cell expression has been associated with lymph node metastasis.
By bringing together T cells, B cells, and DCs to form functional microenvironments in secondary lymphoid organs, CCR7 has been identified as a major homing receptor and important regulator for initiating an antigen-specific immune response. (4, 5)
It has been assigned to the CD197 cluster of differentiation during the 8th HLDA Workshop on Human Leukocyte Differentiation Antigens, held in Adelaide, Australia, in 2004 (6).

REAGENT CONTENTS

Concentration: See lot specific Certificate of Analysis at www.beckmancoulter.com.

PRECAUTIONS

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 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.
8. Any change in the physical appearance of the reagents may indicate deterioration and the reagent should not be used.

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.

LIMITATIONS OF THE TECHNIQUE

Due to the tandem structure of the fluorochrome, PC7 also emits light at 575 nm. This secondary emission peak varies from lot-to-lot of PC7. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a PC7-conjugate.

Non-specific binding may be observed on granulocytes population from whole blood samples with the CD197 (CCR7)-PC7 conjugate.

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