Technical Data Sheet

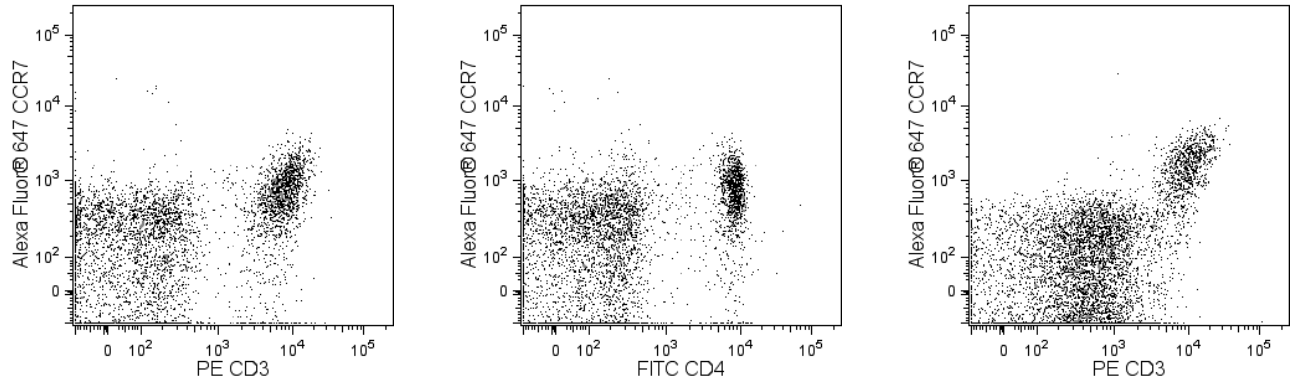
Alexa Fluor® 647 Rat anti-Mouse CD197 (CCR7)

Product Information

Material Number:	**560766**
Alternate Name:	CD197; C-C chemokine receptor type 7; EBI1; Ebi1h; CMKBR7
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	4B12
Isotype:	Rat (LOU) IgG2a
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The monoclonal antibody 4B12/CCR7 reacts with the mouse C-C chemokine receptor type 7 (CCR7). CCR7 is also known as CD197 (previously known as EBI1, Ebi1h and CMKBR7) and plays a central role in mediating homeostatic B and T lymphocyte trafficking to and within secondary lymphoid tissues. CD197 is a seven-transmembrane, G-protein-coupled, 43 kDa glycoprotein receptor that is specific for the CC chemokines, MIP3ß/Exodus-3/ELC/CKb11/Scya19/CCL19 and 6Ckine/Exodus-2/SLC/TCA4/CKb9/Scya21/CCL21. The mouse *Ccr7* gene is located on chromosome 11. CD197 (CCR7) is differentially expressed by subsets of thymocytes. Positive CD197 expression appears to be involved in the cortex-to-medulla migration of positively-selected thymocytes wherein they complete functional maturation including the establishment of central tolerance. It is most highly expressed by some mature medullary single-positive thymocytes. CD197 is also expressed by subsets of mature peripheral CD4+ and CD8+ T lymphocytes including naïve and regulatory T cells and central memory T cells. In addition, it is differentially expressed by subsets of B lymphocytes, dendritic cells, and Langerhans cells. CD197 serves as a homing receptor that helps guide these various cell types to and within lymphoid tissues. In this way, CCR7 supports protective immunity while safeguarding self tolerance. Reportedly, the 4B12/CCR7 antibody is not agonistic, is not blocked by CCL21 nor by physiologic levels of CCL19, nor does the antibody block the binding of CCL21 to CCR7. The immunogen used to generate the 4B12 hybridoma was a mouse CCR7-transfected rat cell line.



Flow cytometric analysis of Alexa Fluor® 647 conjugated anti-mouse CCR7. *Freshly isolated mouse spleen or thymus cells were stained with Alexa Fluor® 647-conjugated anti-mouse CCR7 (Cat. No. 560766), FITC-conjugated anti-mouse CD4 (Cat. No.553047) and PE-conjugated anti-mouse CD3 (Cat. No.553063). The left and middle dot plots show staining of the splenocytes while the right dot plot shows staining of the thymocytes. Flow cytometry was performed on a BD LSR™ II flow cytometry system and the dot plots were derived from the gated events based on light scattering characteristics of viable splenocytes or thymocytes.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
553047	FITC Rat Anti-Mouse CD4	0.5 mg	RM4-5
553063	PE Hamster Anti-Mouse CD3e	0.1 mg	145-2C11

Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.

References

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