

Technical Data Sheet

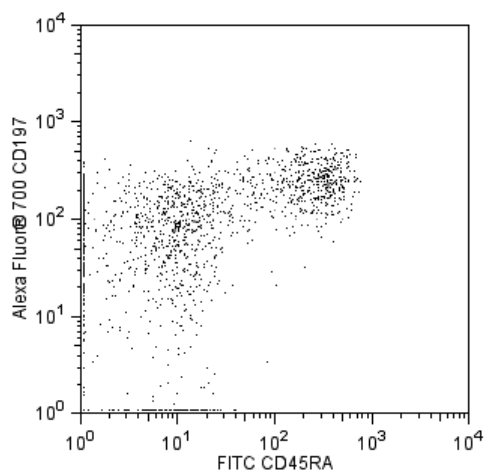
Alexa Fluor® 700 Mouse anti-Human CD197 (CCR7)**Product Information**

Material Number:	561143
Alternate Name:	CC chemokine receptor 7; BLR2; CMKBR7; EBI1; EVI1; MIP-3 beta receptor
Size:	50 Tests
Vol. per Test:	5 µl
Clone:	150503
Immunogen:	Human CCR7 Transfected Cell Line
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human
Workshop:	VIII 80133
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The monoclonal antibody 150503 specifically binds to the human CC chemokine receptor, CCR7, also known as CD197. CCR7 (previously known as BLR2, EBI1 and CMKBR7), a seven-transmembrane, G-protein-coupled receptor, is the specific receptor for CC chemokines, MIP-3β/Exodus 3/ELC/ CCL19 and 6CKine/Exodus 2/SLC/TCA4/CCL21. CCR7 mRNA is expressed mainly in lymphoid tissues including the spleen, lymph nodes and tonsil. CD197/CCR7 is expressed on peripheral T and B lymphocytes by bone marrow and cord blood CD34-positive cells and by mature dendritic cells. In response to its cognate chemokines, CD197/CCR7 mediates homing of leucocytes to secondary lymphoid tissues. Differential CCR7 expression can be used to distinguish naive, central memory, and effector memory T cell subsets. The human *CCR7* gene, unlike other CC chemokine receptor genes, has been mapped to chromosome 17 (region 17q12).

Caution: Under some complex multi-color conditions, this clone may non-specifically interact with antibodies conjugated with APC-H7 or APC-Cy7, contributing to staining artifacts. BD Horizon Brilliant™ Stain Buffer (Cat. No. 563794), designed to minimize on non-specific fluorescent dye interactions, does not resolve this interaction with either APC-H7 or APC-Cy7. For optimal multicolor staining results, alternatives to APC-H7 and APC-Cy7 should be evaluated.



Flow cytometric analysis of CD197 (CCR7) expression on human peripheral blood lymphocytes. Whole blood was stained with Alexa Fluor® 700 Mouse anti-Human CD197 (CCR7) (Cat. No. 561143), PE Mouse Anti-Human CD4 (Cat. No. 555347) and FITC Mouse Anti-Human CD45RA antibodies (Cat. No. 555488). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). A two-color flow cytometric dot plot showing the correlated expression patterns of CD45RA versus CD197 was derived from human CD4-positive T cell gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

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

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

The antibody was conjugated to Alexa Fluor® 700 under optimum conditions, and unreacted Alexa Fluor® 700 was removed.

Application Notes**Application**

Flow cytometry

Routinely Tested

BD Biosciences

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561143 Rev. 3



Recommended Assay Procedure:

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cell and CompBead to ensure that BD Comp beads are appropriate for your specific cellular application.

Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
557880	Alexa Fluor® 700 Mouse IgG2a, κ Isotype Control	0.1 mg	G155-178
555488	FITC Mouse Anti-Human CD45RA	100 Tests	HI100
555347	PE Mouse Anti-Human CD4	100 Tests	RPA-T4
555899	Lysing Buffer	100 mL	(none)
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
349202	BD FACSTM Lysing Solution	100 mL	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100-μl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
7. Alexa Fluor® is a registered trademark of Life Technologies Corporation.
8. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.

References

- Birkenbach M, Josefsen K, Yalamanchili R, Lenoir G, Kieff E. Epstein-Barr virus-induced genes: first lymphocyte-specific G protein-coupled peptide receptors. *Nature*. 1993; 67(4):2209-2220. (Biology)
- Burgstahler R, Kempkes B, Steube K, Lipp M. Expression of the chemokine receptor BLR2/EBI1 is specifically transactivated by Epstein-Barr virus nuclear antigen 2. *Biochem Biophys Res Commun*. 1995; 215(2):737-743. (Biology)
- Kim CH, Pelus LM, White JR, Broxmeyer HE. Macrophage-inflammatory protein-3 beta/EBI1-ligand chemokine/CK beta- 11, a CC chemokine, is a chemoattractant with a specificity for macrophage progenitors among myeloid progenitor cells. *J Immunol*. 1998; 161(5):2580-2585. (Biology)
- Lipp M, Burgstahler R, Muller G, et al. Functional organization of secondary lymphoid organs by the chemokine system. *Curr Top Microbiol Immunol*. 2000; 251:173-179. (Biology)
- Sallusto F, Lenig D, Forster R, Lipp M, Lanzavecchia A. Two subsets of memory T lymphocytes with distinct homing potentials and effector functions. *Nature*. 1999; 401(6754):708-712. (Biology)
- Schweickart VL, Raport CJ, Godiska R, et al. Cloning of human and mouse EBI1, a lymphoid-specific G-protein-coupled receptor encoded on human chromosome 17q12-q21.2. *Genomics*. 1994; 23(3):643-650. (Biology)
- Yanagihara S, Komura E, Nagafune J, Watarai H, Yamaguchi Y. EBI1/CCR7 is a new member of dendritic cell chemokine receptor that is up-regulated upon maturation. *J Immunol*. 1998; 161(6):3096-3102. (Biology)
- Yoshida R, Imai T, Hieshima K, et al. Molecular cloning of a novel human CC chemokine EBI1-ligand chemokine that is a specific functional ligand for EBI1, CCR7. *J Biol Chem*. 1997; 272(21):13803-13809. (Biology)
- Yoshida R, Nagira M, Imai T, et al. EBI1-ligand chemokine (ELC) attracts a broad spectrum of lymphocytes: activated T cells strongly up-regulate CCR7 and efficiently migrate toward ELC. *Int Immunol*. 1998; 10(7):901-910. (Biology)
- Yoshida R, Nagira M, Kitaura M, Imagawa N, Imai T, Yoshie O. Secondary lymphoid-tissue chemokine is a functional ligand for the CC chemokine receptor CCR7. *J Biol Chem*. 1998; 273(12):7118-7122. (Biology)