Technical Data Sheet

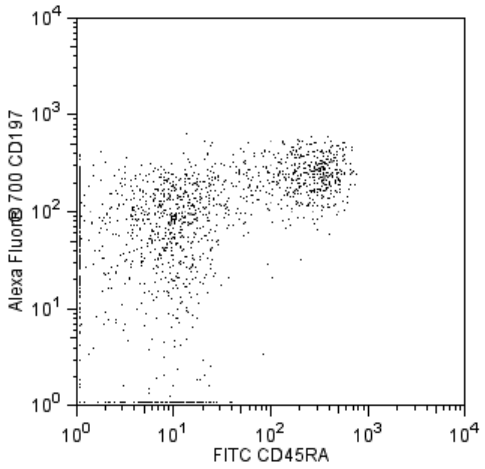
Alexa Fluor® 700 Mouse anti-Human CD197 (CCR7)

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
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 spleen, lymph nodes and tonsil. CCR7 is expressed on peripheral T and B lymphocytes, by bone marrow and cord blood CD34-positive cells and by mature dendritic cells. 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).



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 and FITC Mouse Anti-Human CD45RA antibodies. 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

Suggested Companion Products

Catalog Number	Name	Size	Clone
555488	FITC Mouse Anti-Human CD45RA	100 tests	HI100
555899	Lysing Buffer	100 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
555347	PE Mouse Anti-Human CD4	100 tests	RPA-T4
557880	Alexa Fluor® 700 Mouse IgG2a, κ Isotype Control	0.1 mg	G155-178

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit **bdbiosciences.com/contact**

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. Alexa Fluor® 700 has an adsorption maximum of ~700nm and a peak fluorescence emission of ~720nm. Before staining cells with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. 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.
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 Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols 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)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit **bdbiosciences.com/contact**