

Brilliant Violet 650™ anti-human CD197 (CCR7) Antibody

Catalog# / Size	353233 / 25 tests 353234 / 100 tests
Clone	G043H7
Regulatory Status	RUO
Other Names	BLR2, CDw197, EBI1, CMKBR7
Isotype	Mouse IgG2a, κ
Description	CCR7, also known as CD197, is a chemokine receptor that binds CCL19 and CCL21. CCR7 and its ligands link innate and adaptive immunity by affecting interactions between T cells and dendritic cells and their downstream effect. 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. In addition, during immunological surveillance, B cells recirculate between B-cell-rich compartments (follicles or B cell 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.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Cynomolgus, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	CCR7-transfected cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 650™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.

Brilliant Violet 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 650™ is a trademark of Sirigen Group Ltd.

[Learn more about Brilliant Violet™.](#)

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Excitation Laser	Violet Laser (405 nm)
Product Citations	<ol style="list-style-type: none"> 1. Apostolidis SA, <i>et al.</i> 2021. <i>Nat Med.</i> 27:1990. PubMed 2. Nielsen CM, <i>et al.</i> 2021. <i>Cell Reports Medicine.</i> 2(3):100207. PubMed 3. Sutton HJ, <i>et al.</i> 2021. <i>Cell Reports.</i> 34(6):108684. PubMed 4. Gagne M, <i>et al.</i> 2022. <i>Cell.</i> 185:113. PubMed 5. Pan YG, <i>et al.</i> 2021. <i>Immunity.</i> 54(6):1245-1256.e5. PubMed 6. Bergamaschi L, <i>et al.</i> 2021. <i>Immunity.</i> 54(6):1257-1275.e8. PubMed 7. Nishimura Y, <i>et al.</i> 2017. <i>Nature.</i> 543:559. PubMed 8. Painter MM, <i>et al.</i> 2021. <i>Immunity.</i> 54:2133. PubMed 9. Locke F, <i>et al.</i> 2017. <i>Mol Ther.</i> 25(1):285-295. PubMed 10. Thompson EA, <i>et al.</i> 2021. <i>Cell Rep.</i> 108863:34. PubMed 11. Luo Y, <i>et al.</i> 2021. <i>Nat Commun.</i> 12:3913. PubMed 12. Schielke L, <i>et al.</i> 2022. <i>Front Immunol.</i> 13:916701. PubMed 13. Zhang P, <i>et al.</i> 2021. <i>Nat Med.</i> 22: . PubMed 14. Lederer K, <i>et al.</i> 2022. <i>Cell.</i> . PubMed 15. King HAD, <i>et al.</i> 2021. <i>Proc Natl Acad Sci U S A.</i> 118: . PubMed 16. Seenappa LM, <i>et al.</i> 2022. <i>NPJ Vaccines.</i> 7:128. PubMed 17. Dijkman K, <i>et al.</i> 2021. <i>Cell Reports Medicine.</i> 2(1):100187. PubMed
RRID	<p>AB_2562041 (BioLegend Cat. No. 353233)</p> <p>AB_2563867 (BioLegend Cat. No. 353234)</p>

Antigen Details

Structure	Chemokine receptor, G protein-coupled receptors (GPCR), seven transmembrane receptor.
Distribution	T cells, B cells, NK, dendritic cells.
Function	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.
Ligand/Receptor	CCL19 and CCL21.
Cell Type	B cells, Dendritic cells, NK cells, T cells
Biology Area	Immunology
Molecular Family	CD Molecules, Cytokine/Chemokine Receptors, GPCR
Antigen References	<ol style="list-style-type: none"> 1. Yanagihara S, <i>et al.</i> 1998. <i>J. Immunol.</i> 161:3096. 2. Charo IF, <i>et al.</i> 2006. <i>N. Engl. J. Med.</i> 354:610. 3. Reif K, <i>et al.</i> 2002. <i>Nature</i> 416:94. 4. Nakata B, <i>et al.</i> 2008. <i>Oncology</i> 74:69. 5. Brodie T. <i>et al.</i> 2013. <i>Cytometry A.</i> 6: 530-2. PubMed 6. Graves A.J. <i>et al.</i> 2014. <i>Cytometry A.</i> 7: 576–9 PubMed 7. Moncunill G. <i>et al.</i> 2014. <i>Cytometry A.</i> 12: 995-8 PubMed
Gene ID	1236

Related Protocols

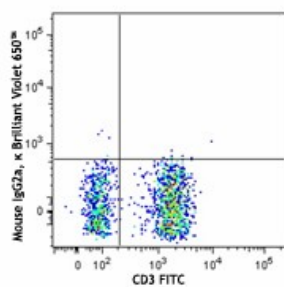
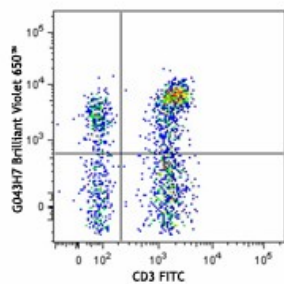
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-human CD197 (CCR7), Alexa Fluor® 488 anti-human CD197 (CCR7), Brilliant Violet 421™ anti-human CD197 (CCR7), PE anti-human CD197 (CCR7), APC/Cyanine7 anti-human CD197 (CCR7), Pacific Blue™ anti-human CD197 (CCR7), APC anti-human CD197 (CCR7), FITC anti-human CD197 (CCR7), Alexa Fluor® 647 anti-human CD197 (CCR7), PerCP/Cyanine5.5 anti-human CD197 (CCR7), Brilliant Violet 605™ anti-human CD197 (CCR7), PE/Cyanine7 anti-human CD197 (CCR7), Brilliant Violet 711™ anti-human CD197 (CCR7), Brilliant Violet 785™ anti-human CD197 (CCR7), Brilliant Violet 510™ anti-human CD197 (CCR7), Brilliant Violet 650™ anti-human CD197 (CCR7), PE/Dazzle™ 594 anti-human CD197 (CCR7), Biotin anti-human CD197 (CCR7), Purified anti-human CD197 (CCR7) (Maxpar® Ready), PerCP anti-human CD197 (CCR7), Alexa Fluor® 700 anti-human CD197 (CCR7), APC/Fire™ 750 anti-human CD197 (CCR7), TotalSeq™-A0148 anti-human CD197 (CCR7), TotalSeq™-B0148 anti-human CD197 (CCR7), TotalSeq™-C0148 anti-human CD197 (CCR7), Brilliant Violet 750™ anti-human CD197 (CCR7), Ultra-LEAF™ Purified anti-human CD197 (CCR7), Spark NIR™ 685 anti-human CD197 (CCR7), KIRAVIA Blue 520™ anti-human CD197

(CCR7), PE/Fire™ 640 anti-human CD197 (CCR7), Spark YG™ 581 anti-human CD197 (CCR7), APC/Fire™ 810 anti-human CD197 (CCR7) Antibody, TotalSeq™-D0148 anti-human CD197 (CCR7), PE/Fire™ 810 anti-human CD197 (CCR7) Antibody, PE/Cyanine5 anti-human CD197 (CCR7)

Product Data



Human peripheral blood lymphocytes were stained with CD3 FITC and CCR7 (clone G043H7) Brilliant Violet 650™ (top) or mouse IgG2a, κ Brilliant Violet 650™ isotype control (bottom).

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