

Brilliant Violet 785™ anti-mouse CD184 (CXCR4) Antibody

Catalog# / Size	146529 / 50 µg
Clone	L276F12
Regulatory Status	RUO
Other Names	Fusin, LESTR, Sdf1r, Cmkar4, PB-CKR, PBSF/SDF-1
Isotype	Rat IgG2b, κ
Description	CD184, also known as CXCR4, is a member of the G protein coupled receptor family that binds CXCL12 (SDF1). CXCR4 and CXCL12 play an important role in immune and inflammatory responses through the regulation of cell migration and growth. CXCR4 plays a crucial role in the pathogenesis of several autoimmune diseases such as atherosclerosis, rheumatoid arthritis, and wound healing. In addition, CXCR4 is the cofactor for fusion and entry of the T cell-tropic form of HIV-1.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse CXCR4-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 785™ under optimal conditions.
Concentration	0.2 mg/mL
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	<p>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 ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Brilliant Violet 785™ excites at 405 nm and emits at 785 nm. The bandpass filter 780/60 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 785™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
Excitation Laser	Violet Laser (405 nm)
Application Notes	Additional reported applications (for the relevant formats) include: <i>in vivo</i> blocking ¹

Application References

1. Costa MJ, *et al.* 2018. *PLoS One*. 13:e0194688 (Block) [PubMed](#)

(PubMed link indicates
BioLegend citation)

RRID AB_3674994 (BioLegend Cat. No. 146529)

Antigen Details

Structure	G-protein-coupled seven transmembrane receptor, 39.7 kD
Distribution	T lymphocytes, monocytes, macrophages, tissue-committed stem/progenitor cells (TCSCs), mast cells, vascular smooth muscle cells (VSMCs)
Function	Development of cardiovascular and central nervous system, hematopoiesis, and colonization of BM by fetal liver-derived hematopoietic stem cells (HSCs) during embryogenesis, homing and egress of CD34 ⁺ CXCR4 ⁺ progenitor cells from bone marrow, and their migration into peripheral tissues. Critical role in homing of cancer cells to specific metastatic sites. Possible role in the ubiquitin proteasome system.
Interaction	Robo -1
Ligand/Receptor	CXCL12 (SDF-1)
Cell Type	Macrophages, Mast cells, Mesenchymal Stem Cells, Monocytes, Neural Stem Cells, T cells
Biology Area	Angiogenesis, Cell Biology, Cell Motility/Cytoskeleton/Structure, Immunology, Neuroscience, Neuroscience Cell Markers, Signal Transduction, Stem Cells, Ubiquitin/Protein Degradation
Molecular Family	CD Molecules, Cytokine/Chemokine Receptors, GPCR
Antigen References	<ol style="list-style-type: none">1. Kucia M, <i>et al.</i> 2005. <i>Stem Cells</i> 23:879.2. Muller A, <i>et al.</i> 2001. <i>Nature</i> 410:50.3. Saini V, <i>et al.</i> 2010. <i>J. Biol. Chem.</i> 285:15566.4. Prasad A, <i>et al.</i> 2007. <i>J. Leuko. Biol.</i> 82:465.5. De Klerck B, <i>et al.</i> 2005. <i>Arthritis Res. Ther.</i> 7:R1208.6. Rueda P, <i>et al.</i> 2008. <i>PLoS One</i> 3:e2543.7. Feng Y, <i>et al.</i> 1996. <i>Science</i> 272:872.
Gene ID	12767

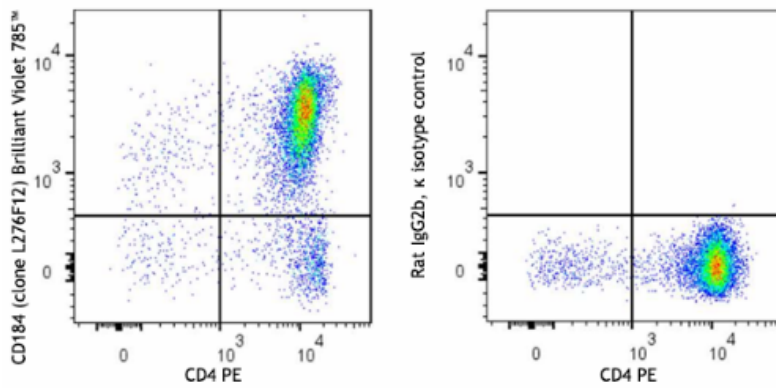
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-mouse CD184 (CXCR4), Alexa Fluor® 647 anti-mouse CD184 (CXCR4), PE anti-mouse CD184 (CXCR4), APC anti-mouse CD184 (CXCR4), PerCP/Cyanine5.5 anti-mouse CD184 (CXCR4), Brilliant Violet 421™ anti-mouse CD184 (CXCR4), PE/Dazzle™ 594 anti-mouse CD184 (CXCR4), Biotin anti-mouse CD184 (CXCR4), Brilliant Violet 711™ anti-mouse CD184 (CXCR4), Brilliant Violet 605™ anti-mouse CD184 (CXCR4), TotalSeq™-A0444 anti-mouse CD184 (CXCR4), TotalSeq™-B0444 anti-mouse CD184 (CXCR4), APC/Cyanine7 anti-mouse CD184 (CXCR4) Antibody, TotalSeq™-C0444 anti-mouse CD184 (CXCR4), KIRAVIA Blue 520™ anti-mouse CD184 (CXCR4), Brilliant Violet 785™ anti-mouse CD184 (CXCR4), Spark Red™ 718 anti-mouse CD184 (CXCR4) Antibody

Product Data



C57BL/6 mouse thymocytes were stained with anti-mouse CD4 (clone GK1.5) PE and anti-mouse CD184 (CXCR4) (clone L276F12) Brilliant Violet 785™ (left) or rat IgG2b, κ Brilliant Violet 785™ isotype control (right).

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