

## Technical Data Sheet

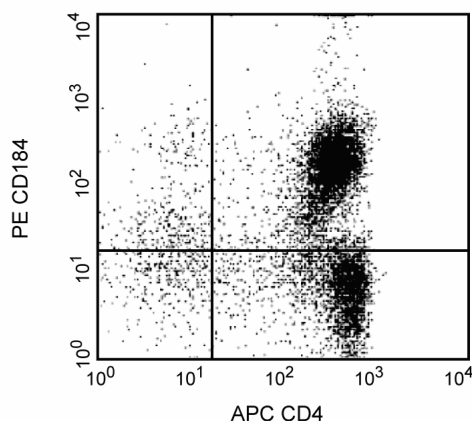
## PE Rat Anti-Mouse CD184

## Product Information

<b>Material Number:</b>	<b>551966</b>
<b>Alternate Name:</b>	CXCR4, C-X-C chemokine receptor type 4; Fusin; LESTR; PB-CKR; Sdf1r
<b>Size:</b>	0.1 mg
<b>Concentration:</b>	0.2 mg/ml
<b>Clone:</b>	2B11/CXCR4
<b>Immunogen:</b>	GST-NCXCR4 fusion protein
<b>Isotype:</b>	Rat IgG2b, $\kappa$
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

## Description

The 2B11/CXCR4 monoclonal antibody specifically reacts with mouse CD184, which is also known as CXC chemokine receptor, CXCR4. CXCR4 (previously known as Fusin and LESTR), a seven-transmembrane, G-protein-coupled receptor, is the specific receptor for CXC chemokines, SDF-1/CXCL12. Mouse CXCR4 shows 91% homology at amino acid level with human CXCR4. CXCR4 is widely expressed by hematopoietic and non-hematopoietic cell types including neutrophils, monocytes, T cells, B cells, CD34-positive progenitor cells, endothelial cells, neurons and astrocytes. Human CXCR4 is used by T-tropic HIV-1 as a co-receptor for viral entry. The mouse CXCR4 gene has been mapped to chromosome 1.



**Expression of CD184 on BALB/c thymocytes.** BALB/c thymocytes were stained with 1.0  $\mu\text{g}/\text{test}$  of PE Rat anti-Mouse CD184 (Cat. No. 551966) and APC Rat anti-Mouse CD4 (Cat. No. 553051). The data reflects gating on lymphocytes, based on forward and side-scattered light signals. The level of nonspecific staining was assessed by using PE Rat IgG2b,  $\kappa$  Isotype Control (Cat. No. 553989). The quadrant markers for the bivariate dot plots were set based on the isotype control.

## 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 with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

## Application Notes

## Application

Flow cytometry	Routinely Tested
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## Recommended Assay Procedure:

Clone 2B11/CXCR4 has been reported to perform optimally when allowed to stain for 45 minutes. In addition, investigators are highly encouraged to titrate the antibody up to saturating levels for optimal performance, minimizing the risk for dim staining. Please refer to <http://www.bdbiosciences.com/support/resources/> for additional resources and protocols.

## Suggested Companion Products

Catalog Number	Name	Size	Clone
553989	PE Rat IgG2b, $\kappa$ Isotype Control	0.1 mg	A95-1
553051	APC Rat Anti-Mouse CD4	0.1 mg	RM4-5
554656	Stain Buffer (FBS)	500 ml	(none)

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## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
5. An isotype control should be used at the same concentration as the antibody of interest.

## References

Bleul CC, Farzan M, Choe H, et al. The lymphocyte chemoattractant SDF-1 is a ligand for LESTR/fusin and blocks HIV-1 entry. *Nature*. 1996; 382(6594):829-833. (Biology)

Bleul CC, Wu L, Hoxie JA, Springer TA, Mackay CR. The HIV coreceptors CXCR4 and CCR5 are differentially expressed and regulated on human T lymphocytes. *Proc Natl Acad Sci U S A*. 1997; 94(5):1925-1930. (Biology)

Feng Y, Broder CC, Kennedy PE, Berger EA. HIV-1 entry cofactor: functional cDNA cloning of a seven-transmembrane, G protein-coupled receptor. *Science*. 1996; 272(5263):872-877. (Biology)

Forster R, Kremmer E, Schubel A, et al. Intracellular and surface expression of the HIV-1 coreceptor CXCR4/fusin on various leukocyte subsets: rapid internalization and recycling upon activation. *J Immunol*. 1998; 160(3):1522-1531. (Immunogen)

Gupta SK, Lysko PG, Pillarisetti K, Ohlstein E, Stadel JM. Chemokine receptors in human endothelial cells. Functional expression of CXCR4 and its transcriptional regulation by inflammatory cytokines. *J Biol Chem*. 1998; 273(7):4282-4287. (Biology)

Heesen M, Berman MA, Benson JD, Gerard C, Dorf ME. Cloning of the mouse fusin gene, homologue to a human HIV-1 co-factor. *J Immunol*. 1996; 157(12):5455-5460. (Biology)

Hesselgesser J, Halks-Miller M, DelVecchio V, et al. CD4-independent association between HIV-1 gp120 and CXCR4: functional chemokine receptors are expressed in human neurons. *Curr Biol*. 1997; 7(2):112-121. (Biology)

Loetscher M, Geiser T, O'Reilly T, Zwaalen R, Baggiolini M, Moser B. Cloning of a human seven-transmembrane domain receptor, LESTR, that is highly expressed in leukocytes. *J Biol Chem*. 1994; 269(1):232-237. (Biology)

Oberlin E, Amara A, Bachelier F, et al. The CXCR4 chemokine SDF-1 is the ligand for LESTR/fusin and prevents infection by T-cell-line-adapted HIV-1. *Nature*. 1996; 382(6594):833-835. (Biology)

Schabath R, Muller G, Schubel A, Kremmer E, Lipp M, Forster R. The murine chemokine receptor CXCR4 is tightly regulated during T cell development and activation. *J Leukoc Biol*. 1999; 66(6):996-1004. (Biology)