Technical Data Sheet

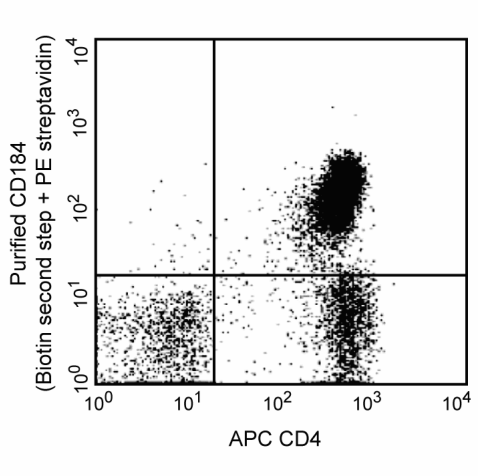
Purified Rat Anti-Mouse CD184 (CXCR4)

Product Information

Material Number:	**551852**
Alternate Name:	CXCR4, C-X-C chemokine receptor type 4; Fusin; LESTR; PB-CKR; Sdf1r
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	2B11/CXCR4
Immunogen:	GST-NCXCR4 fusion protein
Isotype:	Rat IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤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.



Detection of CXCR4 expression on BALB/c thymocytes by purified 2B11/CXCR4. *BALB/c thymocytes were stained with 0.5 µg/test of Purified Rat anti-Mouse CD184 using 3-step staining protocol outlined below and APC Rat anti-Mouse CD4 (Cat. No. 553051). The level of nonspecific staining was assessed by using Purified Rat IgG2b, κ Isotype Control(Cat. No. 553986). The quadrant markers for the bivariate dot plots were set based on the isotype control. Flow cytometry was performed on a FACScan™ Flow Cytometer (BD Biosciences, San Jose, CA).*

Preparation and Storage

Store undiluted at 4°C.

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

Application Notes

Application

Flow cytometry	Routinely Tested
Western blot	Reported

Recommended Assay Procedure:

The purified 2B11/CXCR4 antibody can be used for the immunofluorscent staining and flow cytometric analysis of mouse leukocytes and cell lines that express CDCR4 (see figure). A multistep staining procedure is recommended to amplify immunofluorescent signals for the flow cytometric analysis of mouse CXCR4 expression:

Step 1: Incubate 10e6 cells with 0.5 µg of purified 2B11/CXCR4 antibody at 4°C for 15-20 minutes. Wash cells two times with staining medium containing sodium azide (e.g., Dulbecco's' PBS or tissue culture medium [without phenol red and biotin] with 0.09% sodium azide and 2% heat-inactivated FCS or 0.2% BSA).

Step 2: Incubate the cells with biotinylated mouse anti-rat IgG2b (Cat. No. 553898) at 4°C for 20 minutes. Wash cells two times.

BD Biosciences

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Step 3: Incubate the cells with ≤0.06 µg of streptavidin-phycoerythrin (Cat. No. 554061) at 4°C for 20 minutes. Wash two times. Resuspend cells in staining medium and analyze stained cells by flow cytometry.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553986	Purified Rat IgG2b, κ Isotype Control	0.5 mg	A95-1
553898	Biotin Mouse Anti-Rat IgG2b	0.5 mg	RG7/11.1
554061	PE Streptavidin	0.5 mg	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
553051	APC Rat Anti-Mouse CD4	0.1 mg	RM4-5

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/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. An isotype control should be used at the same concentration as the antibody of interest.

References

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