Technical Data Sheet

BV510 Rat Anti-Mouse F4/80-Like Receptor

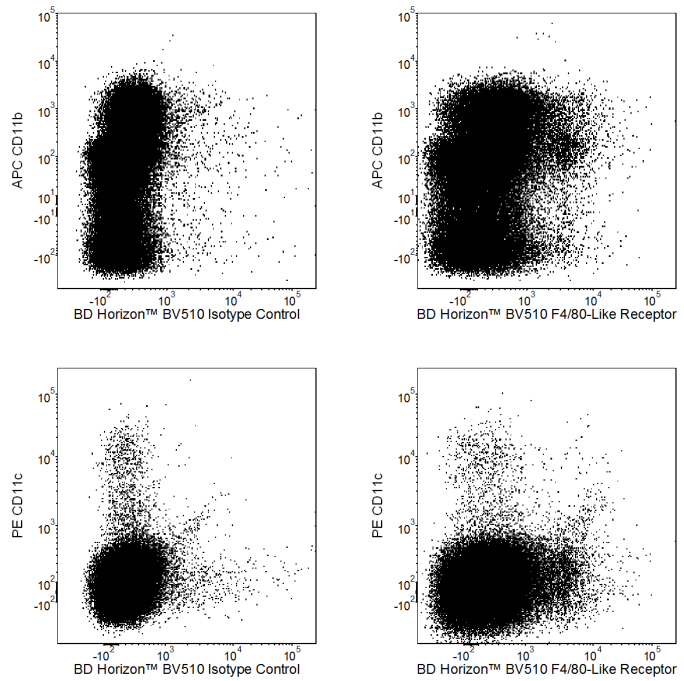
Product Information

Material Number:	**563633**
Alternate Name:	Fire; Emr4; EGF-like module receptor 4; D17Ertd479e; Egf-tm7
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	6F12
Immunogen:	CHO cells expressing recombinant FIRE fusion protein
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 6F12 antibody reacts with a 7-transmembrane-domain protein, which is similar to the F4/80 macrophage antigen of the EGF-TM7 protein family and is encoded by the *Emr4* gene. The FIRE protein is expressed on myeloid cells with a denditic cell (DC) developmental potential, including subsets of DC and macrophages in the spleen and lymph nodes, most resident peritoneal macrophages, many peripheral blood monocytes, and a subpopulation of bone-marrow myeloid-cell progenitors. The protein is not detected on peripheral T and B lymphocytes, and it is down-regulated on thioglycollate-elicited peritoneal macrophages and on dendritic cells activated by GM-CSF, IFN-γ, anti-CD40, and LPS. Using soluble biotinylated fusion protein, a FIRE ligand was detected on a mouse IgG+ B lymphoma cell line (A20), but not on myeloid, fibroblast, or T-cell lines, suggesting that the FIRE protein may be involved in immunoregulatory interactions between antigen-presenting cells and B lymphocytes.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.



Three-color flow cytometric analysis of F4/80-Like Receptor expression on mouse bone marrow cells. *Mouse bone-marrow cells were preincubated with Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with APC Rat Anti-Mouse CD11b (Cat. No. 561690/553312) and PE Hamster Anti-Mouse CD11c (Cat. No. 557401/553802/561044) antibodies and either BD Horizon™ BV510 Rat IgG2a, κ Isotype Control (Cat. No. 562952, Left Panels) or BD Horizon™ BV510 Rat Anti-Mouse F4/80-Like Receptor antibody (Cat. No. 563633; Right Panels). Two-color flow cytometric dot plots show the correlated expression patterns of CD11b (Upper Panels) or CD11c (Lower Panels) versus F4/80-Like Receptor (or Ig Isotype control staining) gated events with the forward and side light-scatter characteristics of viable mouse bone marrow cells. Flow cytometric analysis 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 with BD Horizon™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

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Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562952	BV510 Rat IgG2a, κ Isotype Control	50 µg	R35-95
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2
561690	APC Rat Anti-Mouse CD11b	25 µg	M1/70
553312	APC Rat Anti-Mouse CD11b	0.1 mg	M1/70
557401	PE Hamster Anti-Mouse CD11c	0.1 mg	HL3
553802	PE Hamster Anti-Mouse CD11c	0.2 mg	HL3
561044	PE Hamster Anti-Mouse CD11c	25 µg	HL3

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. Brilliant Violet™ 510 is a trademark of Sirigen.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Caminschi I, Lucas KM, O'Keeffe MA, et al. Molecular cloning of F4/80-like-receptor, a seven-span membrane protein expressed differentially by dendritic cell and monocyte-macrophage subpopulations. *J Immunol.* 2001; 167(7):3570-3576. (Immunogen: Immunohistochemistry, Immunoprecipitation, Western blot)
Stacey M, Chang GW, Sanos SL, et al. EMR4, a novel epidermal growth factor (EGF)-TM7 molecule up-regulated in activated mouse macrophages, binds to a putative cellular ligand on B lymphoma cell line A20. *J Biol Chem.* 2002; 277(32):29283. (Biology)

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