

Technical Data Sheet

BV711 Rat Anti-Mouse F4/80-Like Receptor

Product Information

Material Number:	744339
Size:	50 µg
Clone:	6F12
Alternative Name:	Fire; Emr4; EGF-like module receptor 4; D17Ertd479e; Egf-tm7
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat IgG2a, κ
Immunogen:	CHO cells expressing recombinant FIRE fusion protein
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	52614
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

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 dendritic 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™ BV711 which is part of the BD Horizon Brilliant™ Violet family of dyes. This dye is a tandem fluorochrome of BD Horizon BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

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 BV711 under optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	
563047	BV711 Rat IgG2a, κ Isotype Control	50 µg	R35-95

Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
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/us/s/resources for technical protocols.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. BD Horizon Brilliant Violet 711 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
10. Cy is a trademark of GE Healthcare.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

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.

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.

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