Technical Data Sheet

PE-CF594 Mouse Anti-Mouse IL-17F

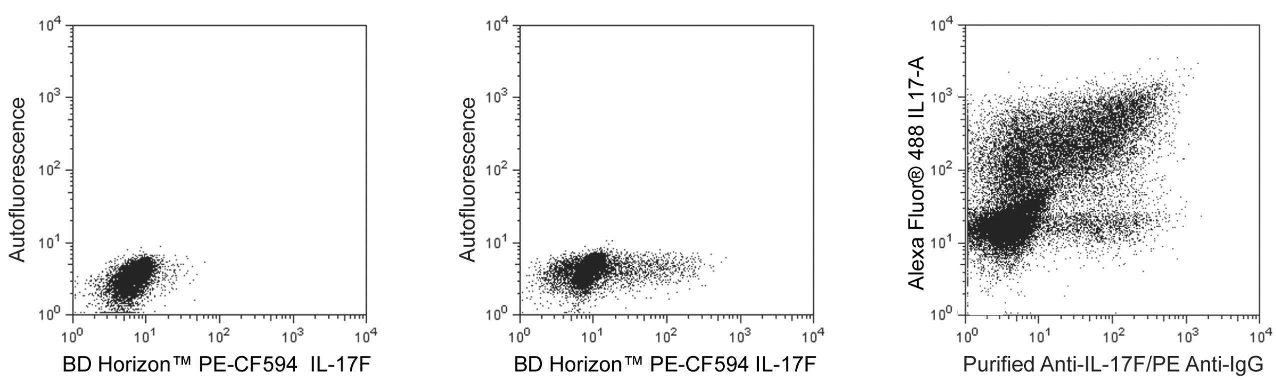
Product Information

Material Number:	**562418**
Alternate Name:	Il17f; interleukin 17F; Interleukin-17F
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	O79-289
Immunogen:	Mouse IL-17F Recombinant Protein
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The O79-289 monoclonal antibody specifically binds to the inflammatory cytokine protein, Interleukin-17 (IL-17F). IL-17F is a member of the IL-17 family of cytokines. Among IL-17 family members, IL-17F has the highest amino acid sequence homology to IL-17A. IL-17F is produced by activated CD4+ T helper (Th17) cells, CD8+ T (Tc17) cells and γδ T cells. IL-17F can be secreted as homodimers or as heterodimers with IL-17A. IL-17F and IL-17A have overlapping functions such as inducing epithelial cells and fibroblasts to produce proinflammatory cytokines and chemokines including IL-6, GM-CSF, CXCL1, CCL2, and CCL7. These factors attract and activate neutrophils and other cell types that mediate protective responses against pathogenic microbes or pathologic allergic or autoimmune diseases. IL-17 gene knockout studies have shown that IL-17F and IL-17A have independent functions as well. IL-17F and IL-17A exert their biological function by binding to and signaling through IL-17 receptors comprised of the transmembrane receptor subunits, IL-17RA (CD217) and IL-17RC.

This antibody is conjugated to BD Horizon™ PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red®. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red® yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red® (eg 610/20-nm filter).



***Flow cytometric analysis of mouse IL-17F expression in resting or stimulated mouse EL4 thymoma cells or in polarized mouse Th17 cells.** Mouse EL4 thymoma cells were either unstimulated or stimulated with Phorbol 12-Myristate 13-Acetate (PMA; Sigma P-8139) and Ionomycin (Sigma I-0634) in the presence of BD GolgiStop™ Protein Transport Inhibitor (Cat. No. 554724) for 5 hours. Th17 cells were generated from Th17-polarizing mouse spleen cell cultures and were stimulated with PMA and Ionomycin with BD GolgiStop™ Protein Transport Inhibitor. The EL4 and Th17 cells were fixed and permeabilized using the BD Cytofix/Cytoperm™ Fixation/Permeabilization Solution Kit (Cat. No. 554714). The unstimulated (Left Panel) and stimulated (Middle Panel) EL4 cells were stained with BD Horizon™ PE-CF594 Mouse Anti-Mouse IL-17F (Cat. No. 562418). To validate O79-289 antibody use for staining IL-17F in Th17 cells generated from primary mouse T cells, the fixed and permeabilized Th17-polarized cells were stained with purified O79-289 Mouse Anti-Mouse IL-17F antibody followed by PE Goat Anti-Mouse Ig (Cat. No. 550589) and with Alexa Fluor® 488 Rat Anti-Mouse IL-17A antibody (Cat. No. 560220) (Right Panel). Two-color flow cytometric dot plots showing the correlated expression patterns of IL-17F versus cellular autofluorescence (measured in the FL1 channel) for EL4 cells or versus IL-17A for Th17 cells were derived from gated events with the forward and side light-scatter characteristics of intact cells. Flow cytometry was performed using a BD™ LSR II Flow Cytometry 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™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
554714	BD Cytofix/Cytoperm™ Fixation/Permeablization Kit	250 tests	(none)
554724	Protein Transport Inhibitor (Containing Monensin)	0.7 ml	(none)
550589	PE Goat Anti-Mouse Ig (Multiple Adsorption)	0.2 mg	Polyclonal
560220	Alexa Fluor® 488 Rat anti-Mouse IL-17A	0.1 mg	TC11-18H10
562292	PE-CF594 Mouse IgG1, κ Isotype Control	0.1 mg	X40

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
9. CF™ is a trademark of Biotium, Inc.
10. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
11. This product is provided under an Agreement between BIOTIUM and BD Biosciences. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications owned or licensed by Biotium, Inc. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. This product is for research use only. Diagnostic uses require a separate license from Biotium, Inc. For information on purchasing a license to this product including for purposes other than research, contact Biotium, Inc., 3159 Corporate Place, Hayward, CA 94545, Tel: (510) 265-1027. Fax: (510) 265-1352. Email: btinfo@biotium.com.
12. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.

References

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