Technical Data Sheet

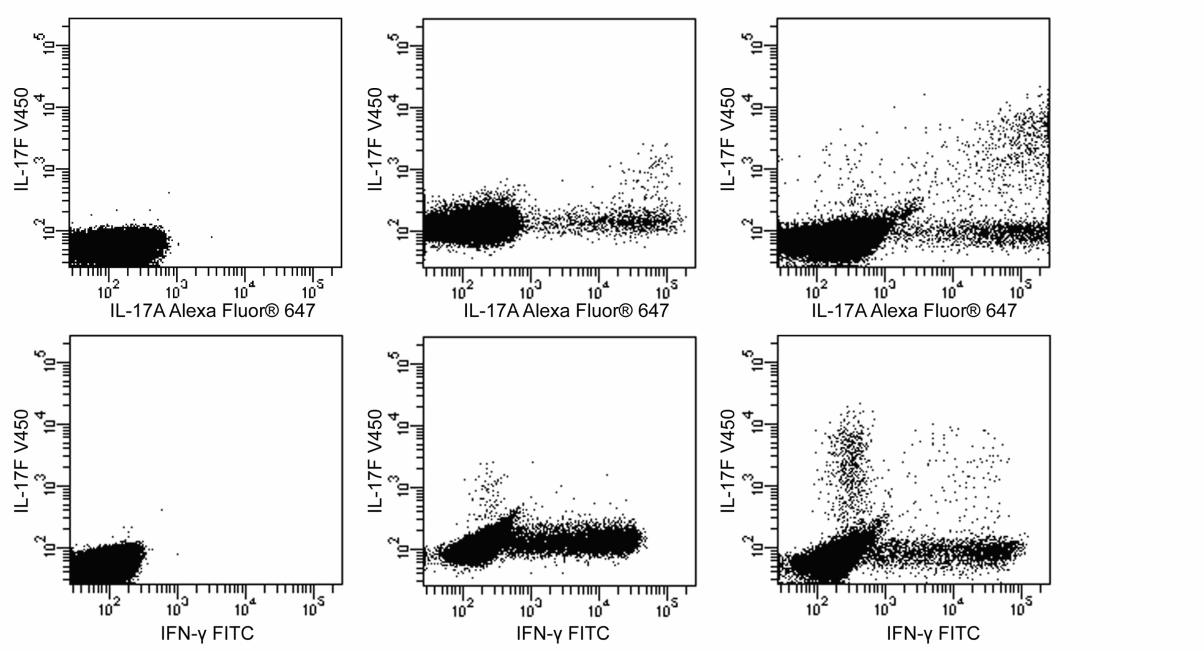
V450 Mouse anti-Human IL-17F

Product Information

Material Number:	**561337**
Alternate Name:	Interleukin-17F; cytokine ML-1; ML-1; IL-24
Size:	100 tests
Vol. per Test:	5 µl
Clone:	O33-782
Immunogen:	Human IL-17F
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The O33-782 monoclonal antibody specifically binds to Interleukin-17F (IL-17F). IL-17F is a member of the IL-17 family of cytokines. IL-17F is encoded by the *IL17F* gene located in chromosome 6 (location: 6p12). IL-17F is a proinflammatory cytokine that is produced by activated T cells including differentiated CD4+ T helper 17 (Th17) cells. Activated Th17 cells can express disulfide-linked IL-17F and IL-17A homodimers as well as IL-17A/IL-17F heterodimers. These IL-17 dimers act by binding to and signaling through IL-17 receptor complexes (IL-17R). IL-17R are comprised of transmembrane IL-17RA and IL-17-RC protein subunits that are expressed by a variety of target cells including epithelial and endothelial cells, keratinocytes, fibroblasts, and granulocytes. IL-17F can induce target cells to produce proinflammatory cytokines such as IL-1β, IL-6, G-CSF, GM-CSF, and TNF and chemokines including CXCL1/Gro-α, CXCL2/Gro-β, and CXCL8/IL-8 that attract and activate leukocytes, eg, neutrophils. Th17 and other IL-17F-producing cells play protective roles in the clearance of extracellular pathogens, including bacteria and fungi. IL-17F can also play adverse roles in inflammation associated with asthma and autoimmune diseases.



Flow cytometric analysis of IL-17F expression by resting and activated human peripheral blood CD4+ T cells and Th17 polarized cells. *Human peripheral blood mononuclear cells were either unstimulated (Left Panels) or stimulated with Phorbol 12-Myristate 13-Acetate (PMA; Sigma P-8139, 50 ng/ml) plus Ionomycin (Sigma I-0634, 1 µg/ml) in the presence of BD GolgiStop™ Protein Transport Inhibitor (Cat. No. 554724) for 5 hours (Middle Panels) or cultured in Th17 polarization conditions and restimulated with PMA and Ionomycin in the presence of BD GolgiStop™ for 5 hours (Right Panels). Cells were then fixed and permeabilized using BD Cytofix/Cytoperm™ reagents (Cat. No. 554714) followed by staining with BD Horizon™ V450 Mouse anti-Human IL-17F, PerCP-Cy5.5 Mouse anti-Human CD4 (Cat. No. 341654), FITC Mouse Anti-Human IFN-γ (Cat. No. 554700) and Alexa Fluor® 647 Mouse anti-Human IL-17A (Cat. No. 560490). Two-color flow cytometric dot plots showing the correlated expression patterns of IL-17F versus IL-17A or IFN-γ were derived from CD4+ gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System. Other compatible fixation and permeabilization treatments are listed in the "Recommended Assay Procedure."*

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Recommended Assay Procedure:

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the **V**iolet laser Ex max of 406 nm and has an Em Max at **450** nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.

This antibody conjugate is suitable for intracellular staining of human peripheral blood mononuclear cells using BD Cytofix/Cytoperm™ reagents or BD™ Phosflow fixation and permeabilization buffers (Fix buffer I with Perm/Wash Buffer I, Perm Buffer II, or Perm Buffer III).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554714	BD Cytofix/Cytoperm™ Fixation/Permeablization Kit	250 tests	(none)
554724	Protein Transport Inhibitor (Containing Monensin)	0.7 ml	(none)
341654	PerCP-Cy5.5 Mouse anti-Human CD4	50 tests	SK3
554700	FITC Mouse Anti-Human IFN-γ	0.1 mg	B27
560490	Alexa Fluor® 647 Mouse anti-Human IL-17A	100 tests	N49-653
560373	V450 Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21
554656	Stain Buffer (FBS)	500 ml	(none)
557870	Fix Buffer I	250 ml	(none)
557885	Perm/Wash Buffer I	125 ml	(none)
558052	Perm Buffer II	125 ml	(none)
558050	Perm Buffer III	125 ml	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. An isotype control should be used at the same concentration as the antibody of interest.
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. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.

References

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Shen F, Gaffen SL. Structure-function relationships in the IL-17 receptor: implications for signal transduction and therapy. *Cytokine.* 2008; 41(2):92-104. (Biology)

Starnes T, Robertson MJ, Sledge G, et al.. Cutting edge: IL-17F, a novel cytokine selectively expressed in activated T cells and monocytes, regulates angiogenesis and endothelial cell cytokine production. *J Immunol.* 2001; 167(8):4137-4140. (Biology)

Wang YH, Liu YJ. The IL-17 cytokine family and their role in allergic inflammation. *Curr Opin Immunol.* 2008; 20(6):697-702. (Biology)

Wright JF, Bennett F, Li B, et al. The human IL-17F/IL-17A heterodimeric cytokine signals through the IL-17RA/IL-17RC receptor complex. *J Immunol.* 2008; 181(4):2799-2805. (Biology)

Wright JF, Guo Y, Quazi A, et al. Identification of an interleukin 17F/17A heterodimer in activated human CD4+ T cells. *J Biol Chem.* 2007; 282(18):13447-13455. (Biology)