Technical Data Sheet

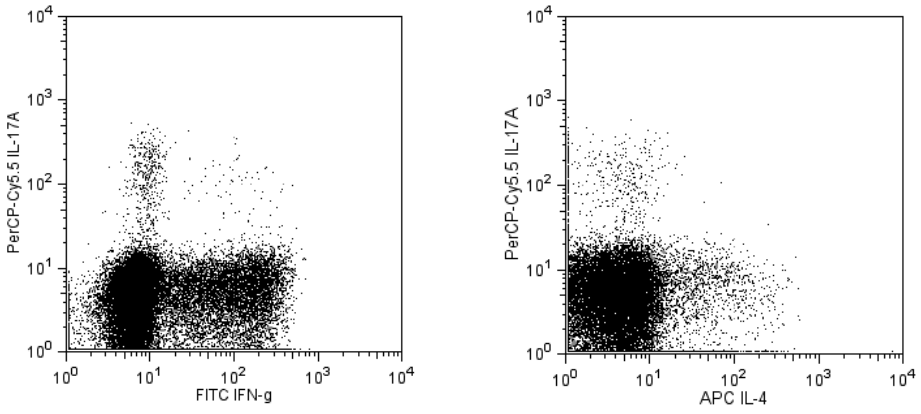
PerCP-Cy™5.5 Mouse Anti-Human IL-17A

Product Information

Material Number:	**560799**
Alternate Name:	IL-17; CTLA8; Cytotoxic T-lymphocyte-associated serine esterase 8
Size:	100 tests
Vol. per Test:	5 µl
Clone:	N49-653
Immunogen:	Human IL-17A Recombinant Protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

Human IL-17A, also known as IL-17, is a proinflammatory cytokine that is encoded by the IL17A gene in chromosome 6. IL-17A is produced as a disulfide-linked homodimer comprised of two mature 136-amino acid polypeptides. It is a member of the IL-17 family of structurally related cytokines, designated IL-17A through IL-17F. Activated memory T cells, especially Th17 cells (specialized IL-17A-producing CD4+ T cells distinct from Th1 and Th2 cells) produce IL-17 and provide protective immunity against pathogens. Activated CD8+ T cells, γδT cells, NK cells and neutrophils can also be activated to produce IL-17A. IL-17A binds to and exerts its biological activity through IL-17 receptors (IL-17R) that are expressed by a variety of target cells including fibroblasts, epithelial and endothelial cells, monocytes/macrophages and mast cells. The ubiquitous IL-17R expression pattern may explain the broad tissue responsiveness to IL-17. IL-17 induces stromal cells to secrete cytokines and chemokines involved in inflammatory and hematopoietic processes. For example, IL-17 induces fibroblasts to produce IL-6, IL-8, G-CSF and express increased surface ICAM-1. The N49-653 antibody reacts with human IL-17A.



Flow cytometric analysis of IL-17A in stimulated human lymphocytes. *Human peripheral blood mononuclear cells (PBMC) were stimulated with PMA and Ionomycin in the presence of BD GolgiStop™ (Cat. No. 554724) for 5 hours. Cells were then fixed and permeabilized using BD Cytofix/ Cytoperm™ reagents (Cat. No. 554714) followed by staining with PerCP-Cy5.5 anti-human IL-17A, FITC anti-human IFN-γ (Cat. No. 554700), and APC anti-human IL-4 (Cat. No. 554486). Two-color flow cytometric dot plots showing the correlated expression patterns of IL-17A vs IFN-γ (Left panel) or IL-4 (Right panel) were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed with doublet discrimination using a BD™ LSRII System.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with PerCP-Cy5.5 under optimum conditions, and unconjugated antibody and free PerCP-Cy5.5 were removed. Storage of PerCP-Cy5.5 conjugates in unoptimized diluent is not recommended and may result in loss of signal intensity.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554724	Protein Transport Inhibitor (Containing Monensin)	0.7 ml	(none)
554714	BD Cytofix/Cytoperm™ Fixation/Permeablization Kit	250 tests	(none)
554700	FITC Mouse Anti-Human IFN-γ	0.1 mg	B27
554486	APC Rat Anti-Human IL-4	0.1 mg	MP4-25D2

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. 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.
4. PerCP-Cy5.5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using dual-laser cytometers, which may directly excite both PerCP and Cy5.5™. We recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
5. PerCP-Cy5.5–labelled antibodies can be used with FITC- and R-PE–labelled reagents in single-laser flow cytometers with no significant spectral overlap of PerCP-Cy5.5, FITC, and R-PE fluorescence.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
7. Cy is a trademark of Amersham Biosciences Limited. This conjugated product is sold under license to the following patents: US Patent Nos. 5,486,616; 5,569,587; 5,569,766; 5,627,027.
8. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.
9. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
10. 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.

References

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Weaver CT, Hatton RD, Mangan PR, Harrington LE. IL-17 family cytokines and the expanding diversity of effector T cell lineages. *Annu Rev Immunol.* 2007; 25:821-852. (Biology)

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