

## Technical Data Sheet

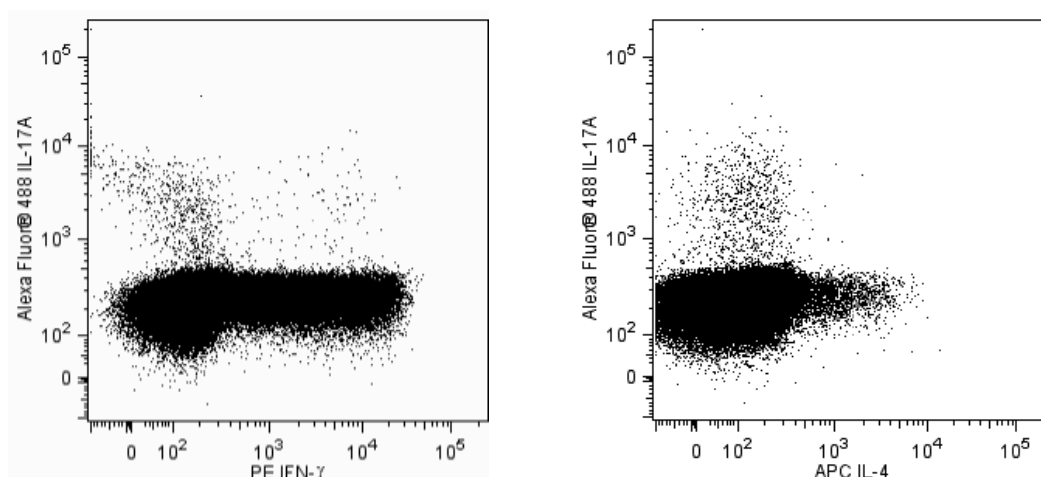
## Alexa Fluor® 488 Mouse anti-Human IL-17A

## Product Information

<b>Material Number:</b>	<b>560489</b>
<b>Alternate Name:</b>	IL-17; CTLA8; Cytotoxic T-lymphocyte-associated serine esterase 8
<b>Size:</b>	25 tests
<b>Vol. per Test:</b>	20 µl
<b>Clone:</b>	N49-653
<b>Immunogen:</b>	Human IL-17A Recombinant Protein
<b>Isotype:</b>	Mouse IgG1, κ
<b>Reactivity:</b>	QC tested: Human
<b>Storage Buffer:</b>	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 Alexa Fluor® 488 anti-human IL-17A on stimulated PBMC.** Human PBMC were stimulated with PMA/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 Alexa Fluor® 488 anti-human IL-17A and PE anti-human IFN-γ (Cat. No. 559327; left panel) and APC anti-human IL-4 (Cat. No. 554486; right panel). The dot plots were derived from a lymphocyte gate. Flow cytometry was performed on a BD FACSCalibur™ System.

## Preparation and Storage

The antibody was conjugated to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was removed.

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.

## Application Notes

## Application

Intracellular staining (flow cytometry)	Routinely Tested
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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/Permeabilization Kit	250 tests	(none)
559327	PE Mouse Anti-Human IFN- $\gamma$	100 tests	B27
554486	APC Rat Anti-Human IL-4	0.1 mg	MP4-25D2
555493	PE Mouse Anti-Human CD45RO	100 tests	UCHL1
554702	APC Mouse Anti-Human IFN- $\gamma$	0.1 mg	B27
554485	PE Rat Anti-Human IL-4	0.1 mg	MP4-25D2
559865	APC Mouse Anti-Human CD45RO	100 tests	UCHL1

## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100- $\mu$ l experimental sample (a test).
2. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® 488 fluorochrome emission is collected at the same instrument settings as for fluorescein isothiocyanate (FITC).
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. 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.
8. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References

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Korn T, Oukka M, Kuchroo V, Bettelli E. Th17 cells: effector T cells with inflammatory properties. *Semin Immunol.* 2007; 19(6):362-371. (Biology)

Moseley TA, Haudenschild DR, Rose L, Reddi AH. Interleukin-17 family and IL-17 receptors. *Cytokine Growth Factor Rev.* 2003; 14(2):155-174. (Biology)

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)

Yao Z, Painter SL, Fanslow WC, et al. Human IL-17: a novel cytokine derived from T cells. *J Immunol.* 1995; 155(12):5483-5486. (Immunogen)

Yao Z, Spriggs MK, Derry JM, et al. Molecular characterization of the human interleukin (IL)-17 receptor. *Cytokine.* 1997; 9(11):794-800. (Biology)

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