

# IL-17A Monoclonal Antibody (eBio64CAP17), eBioscience™

## Product Details

Size	50 µg
Species Reactivity	Human
Published Species	Cynomolgus monkey, Non-human primate, Human, Mouse, Rhesus monkey
Host/Isotype	Mouse / IgG1, kappa
Class	Monoclonal
Type	Antibody
Clone	eBio64CAP17
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C
RRID	AB_493936

Applications	Tested Dilution	Publications
Western Blot (WB)	Assay-dependent	-
Immunohistochemistry (IHC)	-	1 Publication
Immunohistochemistry (Frozen) (IHC (F))	Assay-Dependent	1 Publication
Immunocytochemistry (ICC/IF)	-	2 Publications
Flow Cytometry (Flow)	Assay-Dependent	24 Publications
ELISA (ELISA)	0.5-2 µg/mL	11 Publications
Immunoprecipitation (IP)	Assay-Dependent	-
Neutralization (Neu)	-	5 Publications
Functional Assay (FN)	-	1 Publication
Radioimmune Assays (RIA)	-	1 Publication

## Product Specific Information

Description: The eBio64CAP17 antibody reacts with human IL-17A; the antibody has been reported to cross react with Rhesus monkey IL-17A, as verified by intracellular staining experiments. The eBio64CAP17 antibody is a neutralizing antibody. This antibody has been shown to have no reactivity to human IL-17F. Reactivity to other members of the IL-17 family has not been evaluated. Interleukin-17A (IL-17A) is a CD4+ T cell-derived cytokine that promotes inflammatory responses in cell lines and is elevated in rheumatoid arthritis, asthma, multiple sclerosis, psoriasis, and transplant rejection. The cDNA encoding human IL-17A was isolated from a library of CD4+ T cells; the encoded protein exhibits 72 percent amino acid identity with HVS13, an open reading frame from a T lymphotropic Herpesvirus saimiri, and 63 percent with mouse CTLA-8 (cytotoxic T-lymphocyte associated antigen-8). Human IL-17A exists as glycosylated 20-30 kD homodimers. High levels of IL-17A homodimer are produced by activated peripheral blood CD4+ T-cells. IL-17A enhances expression of the intracellular adhesion molecule-1 (ICAM-1) in human fibroblasts. Human IL-17A also stimulates epithelial, endothelial, or fibroblastic cells to secrete IL-6, IL-8, G-CSF, and PGE2. In the presence of human IL-17A, fibroblasts can sustain the proliferation of CD34+ hematopoietic progenitors and induce maturation into neutrophils. Mouse, rat, and human IL-17A can induce IL-6 secretion in mouse stromal

cells, indicating that all homologs can recognize the mouse IL-17A receptor.

IL-23-dependent, IL-17A-producing CD4+ T cells (Th-17 cells) have been identified as a unique subset of Th cells that develops along a pathway that is distinct from the Th1- and Th2- cell differentiation pathways. The hallmark effector molecules of Th1 and Th2 cells, e.g., IFN- $\gamma$  and IL-4, have each been found to negatively regulate the generation of these Th-17 cells.

Additionally, activated human CD4+ T cells have been found to produce the IL-17A/F heterodimer, as well as the corresponding homodimers. In comparing the relative potency of IL-17A, IL-17F, and IL-17A/F, all three were found to induce GRO- $\alpha$  secretion; IL-17A was most potent, followed by IL-17A/F heterodimer, then IL-17F (100fold lower than IL-17A). eBio64CAP17 can be used to detect IL-17 heterodimers by immunoprecipitation followed by immunoblot with H17F10A7 anti-IL17F monoclonal antibody.

The eBio64CAP17 has been shown to react to rhesus and marmoset primates.

**Applications Reported:** This eBio64CAP17 antibody has been reported for use in intracellular staining followed by flow cytometric analysis, immunoprecipitation, IHC frozen, ELISA, and ELISPOT. (Fluorochrome conjugated eBio64CAP17 is recommended for use in intracellular flow cytometry).

**Applications Tested:** The Affinity Purified eBio64CAP17 antibody has been tested as the capture antibody in a sandwich ELISA for measurement of human IL-17A protein levels, in combination with the biotinylated eBio64DEC17 antibody (13-7179) for detection and recombinant human IL-17A (14-8179) as the standard. A suitable range of concentrations of this antibody for ELISA capture is 0.5 - 2.0  $\mu\text{g/mL}$ . A standard curve consisting of doubling dilutions of the recombinant standard over the range of 1000 pg/mL - 8 pg/mL should be included in each ELISA plate.

The Functional Grade Purified eBio64CAP17 antibody has been tested by LAL assay to verify lowest endotoxin levels and has been tested for neutralization of IL-17A bioactivity and for ELISPOT capture.

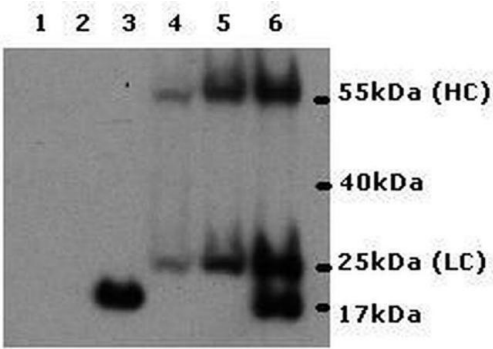
It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

**Purity:** Greater than 90%, as determined by SDS-PAGE.

**Aggregation:** Less than 10%, as determined by HPLC.

**Filtration:** 0.2  $\mu\text{m}$  post-manufacturing filtered.

**Product Images For IL-17A Monoclonal Antibody (eBio64CAP17), eBioscience™**



**IL-17A Antibody (14-7178-81) in WB**  
Immunoprecipitation of IL-17A/F heterodimer with anti-IL-17A clone eBio64CAP17 followed by immunoblot with anti-IL-17F clone H17F10A7. PBMC (1 and 4), in vitro-polarized Th17 (2 and 5), or PMA and Ionomycin-restimulated Th17 (3 and 6) were loaded. Direct lysates (lanes 1-3) are on the left and IP samples (lanes 4-6) are on the right.

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Immunohistochemistry (1)

<p><b>Mucosal immunology</b></p> <p><b>Loss of mucosal CD103+ DCs and IL-17+ and IL-22+ lymphocytes is associated with mucosal damage in SIV infection.</b></p> <p>"14-7178 was used in Immunohistochemistry to study the underlying mechanisms responsible for the association of HIV /SIV infection with microbial translocation and persistent pathological immune activation."</p> <p>Authors: Klatt NR,Estes JD,Sun X,Ortiz AM,Barber JS,Harris LD,Cervasi B,Yokomizo LK,Pan L,Vinton CL,Tabb B, Canary LA,Dang Q,Hirsch VM,Alter G,Belkaid Y,Lifson JD,Silvestri G,Milner JD,Paiardini M,Haddad EK,Brenchley JM</p>	<p><b>Year</b> 2012</p> <p><b>Species</b> Rhesus monkey</p>
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Immunohistochemistry (Frozen) (1)

<p><b>The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society</b></p> <p><b>A monoclonal antibody selection for immunohistochemical examination of lymphoid tissues from non-human primates.</b></p> <p>"Published figure using IL-17A monoclonal antibody (Product # 14-7178-81) in Immunohistochemistry"</p> <p>Authors: Kap YS,van Meurs M,van Driel N,Koopman G,Melief MJ,Brok HP,Laman JD,'t Hart BA</p>	<p><b>Year</b> 2009</p>
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Immunocytochemistry (2)

<p><b>PloS one</b></p> <p><b>CCL20 Secretion from the Nucleus Pulposus Improves the Recruitment of CCR6-Expressing Th17 Cells to Degenerated IVD Tissues.</b></p> <p>"Published figure using IL-17A monoclonal antibody (Product # 14-7178-81) in Immunofluorescence"</p> <p>Authors: Zhang W,Nie L,Wang Y,Wang XP,Zhao H,Dongol S,Maharjan S,Cheng L</p>	<p><b>Year</b> 2017</p>
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<p><b>Biomicrofluidics</b></p> <p><b>Fiber composite slices for multiplexed immunoassays.</b></p> <p>"14-7178 was used in Immuno-assay to describe a new type of low-cost fabrication method for a scalable immunoassay platform based on cotton threads."</p> <p>Authors: Kim J,Bae S,Song S,Chung K,Kwon S</p>	<p><b>Year</b> 2015</p> <p><b>Species</b> Human</p>
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More applications with references on thermofisher.com

- Flow (24)
- ELISA (11)
- Neu (5)
- FN (1)
- RIA (1)

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