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Anti- IL 17A Monoclonal Antibody

Catalog # ABO15024

Product Information

Application	IHC-P
Primary Accession	Q62386
Host	Mouse
Isotype	Mouse IgG1, κ
Reactivity	Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti- IL 17A Monoclonal Antibody . Tested in IHC-P applications. This antibody reacts with Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	16171
Other Names	Interleukin-17A, IL-17, IL-17A, Cytotoxic T-lymphocyte-associated antigen 8, CTLA-8, Il17a, Ctla8, Il17
Calculated MW	17490
Application Details	Immunohistochemistry (Paraffin-embedded Section), 2-5 □g/ml, Mouse
Source	Eukaryota
Protein Name	Interleukin-17A
Contents	PBS, pH 7.0. Contains no stabilizers or preservatives
Clone Names	Clone: AFIF-9
Immunogen	Mouse IL-17A cross-linked to OVA
Purification	Immunogen affinity purified.
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	Il17a
Synonyms	Ctla8, Il17

Function	Effector cytokine of innate and adaptive immune system involved in antimicrobial host defense and maintenance of tissue integrity (PubMed:18025225, PubMed:19144317, PubMed:26431948). Signals via IL17RA-IL17RC heterodimeric receptor complex, triggering homotypic interaction of IL17RA and IL17RC chains with TRAF3IP2 adapter. This leads to downstream TRAF6-mediated activation of NF-kappa-B and MAPkinase pathways ultimately resulting in transcriptional activation of cytokines, chemokines, antimicrobial peptides and matrix metalloproteinases, with potential strong immune inflammation (PubMed:16200068, PubMed:17911633, PubMed:19144317, PubMed:26431948). Plays an important role in connecting T cell-mediated adaptive immunity and acute inflammatory response to destroy extracellular bacteria and fungi. As a signature effector cytokine of T-helper 17 cells (Th17), primarily induces neutrophil activation and recruitment at infection and inflammatory sites (PubMed:18025225). In airway epithelium, mediates neutrophil chemotaxis via induction of CXCL1 and CXCL5 chemokines (PubMed:18025225, PubMed:27923703). In secondary lymphoid organs, contributes to germinal center formation by regulating the chemotactic response of B cells to CXCL12 and CXCL13, enhancing retention of B cells within the germinal centers, B cell somatic hypermutation rate and selection toward plasma cells (PubMed:18157131). Effector cytokine of a subset of gamma-delta T cells that functions as part of an inflammatory circuit downstream IL1B, TLR2 and IL23A-IL12B to promote neutrophil recruitment for efficient bacterial clearance (PubMed:17372004, PubMed:20364087, PubMed:28709803). Effector cytokine of innate immune cells including invariant natural killer cell (iNKT) and group 3 innate lymphoid cells that mediate initial neutrophilic inflammation (PubMed:17470641, PubMed:23255360). Involved in the maintenance of the integrity of epithelial barriers during homeostasis and pathogen infection. Upon acute injury, has a direct role in epithelial barrier formation by regulating OCLN localization and tight junction biogenesis (PubMed:26431948). As part of the mucosal immune response induced by commensal bacteria, enhances host's ability to resist pathogenic bacterial and fungal infections by promoting neutrophil recruitment and antimicrobial peptides release (PubMed:28709803). In synergy with IL17F, mediates the production of antimicrobial beta-defensins DEFB1, DEFB103A, and DEFB104A by mucosal epithelial cells, limiting the entry of microbes through the epithelial barriers (PubMed:19144317). Involved in antiviral host defense through various mechanisms (PubMed:21946434, PubMed:26735852, PubMed:27795421). Enhances immunity against West Nile virus by promoting T cell cytotoxicity (PubMed:27795421). May play a beneficial role in influenza A virus (H5N1) infection by enhancing B cell recruitment and immune response in the lung (PubMed:21946434). Contributes to influenza A virus (H1N1) clearance by driving the differentiation of B-1a B cells, providing for production of virus-specific IgM antibodies at first line of host defense (PubMed:26735852).
Cellular Location	Secreted.
Tissue Location	Expressed by Th17 cell lineage (at protein level). The expression pattern reflects the differentiation state, with IL17A- IL17F heterodimers produced at higher levels than IL17A-IL17A and IL17F-IL17F dimers in fully differentiated Th17 cells (PubMed:16990136, PubMed:18025225). Expressed in innate lymphoid cells (at protein level) (PubMed:23255360, PubMed:28709803). Expressed in gamma-delta T cell subsets (at protein level) (PubMed:17372004, PubMed:20364087, PubMed:26431948, PubMed:28709803). Expressed in iNKT cells (at protein level) (PubMed:17470641).

Background

Interleukin-17A is a protein that in humans is encoded by the IL17A gene. The protein encoded by this gene is a proinflammatory cytokine produced by activated T cells. This cytokine regulates the activities of NF-kappaB and mitogen-activated protein kinases. This cytokine can stimulate the expression of IL6 and cyclooxygenase-2 (PTGS2/COX-2), as well as enhance the production of nitric oxide (NO). High levels of this cytokine are associated with several chronic inflammatory diseases including rheumatoid arthritis, psoriasis and multiple sclerosis.

Images

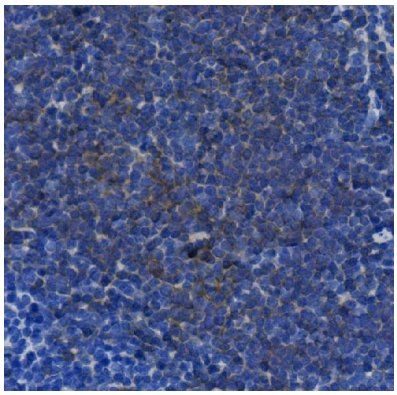


Figure 1. IHC analysis of IL17A using anti-IL17A antibody (M00421-2).
IL17A was detected in paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/ml mouse anti-IL17A Antibody (M00421-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

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