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Anti-Mouse IL-17A (RAT) Monoclonal Antibody
Mouse IL-17A Antibody
Catalog # ASR5029

Specification

Anti-Mouse IL-17A (RAT) Monoclonal Antibody - Product Information

Host	**Rat**
Conjugate	**Unconjugated**
Target Species	**Mouse**
Reactivity	**Mouse**
Clonality	**Monoclonal**
Application	**WB, E, I, LCI**
Application Note	**IL-17 A antibody has been tested for use in western blotting, Flow Cytometry and ELISA. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 23 kDa in size corresponding to the mature mouse IL-17A protein, a non-glycosylated polypeptide chain consisting of 207 amino acids, by western blotting in appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**This Mouse IL-17A monoclonal antibody was produced in rats by repeated immunizations with full length recombinant mouse IL-17A protein (produced in E.coli) followed by hybridoma development.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Mouse IL-17A (RAT) Monoclonal Antibody - Additional Information

Gene ID 16171

Other Names
16171

Purity
This monoclonal antibody is purified by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. This antibody is specific for mouse IL-17A protein. Cross-reactivity with IL-17A from other sources has not been determined.

Storage Condition
Store IL-17A antibody at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Mouse IL-17A (RAT) Monoclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/21946434" target="_blank">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.

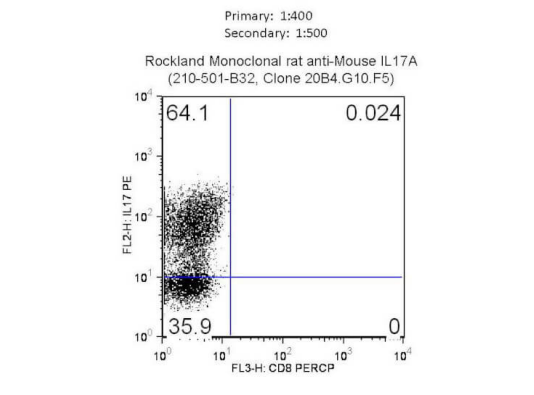
Tissue Location
Expressed by Th17 cell lineage (at protein level). The expression pattern reflects the differentiation state, with IL17A- IL17F heterodimers produced at higher levels than IL17A-IL17A and IL17F-IL17F dimers in fully differentiated Th17 cells (PubMed:16990136, PubMed:18025225). Expressed 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).

Anti-Mouse IL-17A (RAT) Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Mouse IL-17A (RAT) Monoclonal Antibody - Images



Rockland monoclonal anti-IL-17A was used to detect IL-17A and separate Mouse CD4+ Cells by flow cytometry. Mouse CD4+ T cells were isolated from freshly dissected spleen by centrifugation

in T cell separation media and selected by magnetic separation. Cells were grown on plates coated with anti-CD3 antibody, and stimulated with: 5 µg/mL anti-CD28, 10 ng/mL IL-1beta, 50 ng/mL mouse IL-6, 1 ng/mL TGFbeta1 and 10 µg/mL anti-mouse IFN gamma over 8-10 days of culture. Cells were incubated for 15-20 minutes with addition of rat anti-mouse CD4 APC at a concentration of 0.125 µg/mL, washed, fixed and permeabilized and incubated with Rockland Rat anti-mouse IL-17A monoclonal Antibody (210-501-B32) or controls as shown. Cells were washed, incubated in streptavidin conjugated PE, fixed and analyzed by Flow cytometry. Shown here are results for Rockland's monoclonal anti mouse IL-17A antibody (210-501-B32).

Anti-Mouse IL-17A (RAT) Monoclonal Antibody - Background

Mouse Interleukin-17A (IL-17A), also known as CTLA-8, is a proinflammatory cytokine member of a six-species family of proteins (IL-17A-17F). Mouse IL-17A protein is a homodimer consisting of two 134 amino acids peptides. IL-17A is secreted mainly by activated CD4+ and CD8+ T lymphocytes and acts through its receptor, IL-17R, to induce the expression of many mediators of inflammation, most strikingly, those that are involved in the proliferation, maturation and chemotaxis of neutrophils. Elevated levels of IL-17A have been associated with several conditions, including rheumatoid arthritis, airway inflammation, allograft rejection, inflammatory bowel disease, psoriasis, cancer and multiple sclerosis. There is 58% identity between the amino acid sequence of human and mouse IL-17A. Anti-IL-17A antibody is ideal for investigators involved in Immunology research.