

IL-17, Mouse

Catalog # PVGS1276

Product Information

Primary Accession Sequence	Q62386 Ala ²⁶ -Ala ¹⁵⁸ (accession number: Q62386), expressed with an N-terminal Met.
Purity	> 95% as analyzed by SDS-PAGE and HPLC.
Endotoxin Level	

Additional Information

Gene ID	16171
Other Names	Interleukin-17A, IL-17, IL-17A, Cytotoxic T-lymphocyte-associated antigen 8, CTLA-8, Il17a, Ctla8, Il17
Target Background	Interleukin-17 (IL-17), Mouse

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](#)).

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