

IL-17A Catalog # PVGS1287

## **Product Information**

Primary Accession Species	<u>Q62386</u> Mouse
Sequence	Ala26-Ala158
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level Biological Activity	Measured by its ability to induce IL-1a, IL-4 and IL-6 production by primary mouse splenocytes.
Expression System	СНО
Formulation Reconstitution	Lyophilized after extensive dialysis against PBS. It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in $ddH_2O$ or PBS up to 100 [g/m].
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

## **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-17A, (also known as CTLA-8) is a T cell-expressed pleiotropic cytokine that exhibits a high degree of homology to a protein encoded by the ORF13 gene of herpesvirus Saimiri. cDNA clones encoding IL-17 have been isolated from activated rat, mouse and human T cells. IL-17 represents a family of structurally-related cytokines that share a highly conserved C-terminal region but differ from one another in their N-terminal regions and in their distinct biological roles. The six known members of this family, IL-17A through IL-17F, are secreted as homodimers.

## **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 L17R&112RC heterodimeric receptor complex, triggering homotypic interaction of L17R and L17RC 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 chemotaxic 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: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 fungel infections
	Secreted.
ISSUE LOCATION	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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