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IL-17A

Catalog # PVGS1396

Product Information

Primary Accession	Q16552
Species	Human
Sequence	Gly24-Ala155
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	
Expression System	CHO
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	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/ml.
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	3605
Other Names	Interleukin-17A, IL-17, IL-17A, Cytotoxic T-lymphocyte-associated antigen 8, CTLA-8, IL17A, CTLA8, IL17
Target Background	Interleukin-17A (IL-17A),also known as CTLA-8 and IL-17, is a proinflammatory cytokine belonging to the IL-17 family. It is secreted by Th17 cells, gamma/delta T cells, NK cells and neutrophils. IL-17A signals through IL-17 receptor A in a complex with receptor C or D to regulate NF-kappaB and MAP kinase activities. IL-17A plays important roles in the anti-microbial response and chronic inflammation. It stimulates the production of IL-6, IL-8 and G-CSF in epithelial and endothelial cells, and induces the expression of ICAM-1 in fibroblasts. Clinically, IL-17A has been associated with inflammatory diseases, such as rheumatoid arthritis, psoriasis and multiple sclerosis.

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:24120361). 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:17911633, PubMed:18684971, PubMed:19825828, PubMed:21350122, PubMed:24120361, PubMed:8676080). 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 (By similarity). In airway epithelium, mediates neutrophil chemotaxis via induction of CXCL1 and CXCL5 chemokines (By similarity). 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 (By similarity). 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 (By similarity). Effector cytokine of innate immune cells including invariant natural killer cell (iNKT) and group 3 innate lymphoid cells that mediate initial neutrophilic inflammation (By similarity). Involved in the maintenance of the integrity of epithelial barriers during homeostasis and pathogen infection (PubMed:21350122). Upon acute injury, has a direct role in epithelial barrier formation by regulating OCLN localization and tight junction biogenesis (By similarity). 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 (By similarity). 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 (By similarity). Involved in antiviral host defense through various mechanisms (By similarity). Enhances immunity against West Nile virus by promoting T cell cytotoxicity (By similarity). May play a beneficial role in influenza A virus (H5N1) infection by enhancing B cell recruitment and immune response in the lung (By similarity). 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 (By similarity).
Cellular Location	Secreted
Tissue Location	Expressed in memory Th17 cells (at protein level).