

# Mouse IL-17A Recombinant Protein, eBioscience™

## Product Details

Size	25 µg
Expression system	E. coli
Class	Recombinant
Type	Protein
Conjugate	Unconjugated
Form	Liquid
Concentration	0.1 mg/mL
Storage conditions	-80°C

Applications	Tested Dilution	Publications
ELISA (ELISA)	Assay-Dependent	-
Functional Assay (FN)	Assay-Dependent	-
Control (Ctrl)	Assay-Dependent	-
Miscellaneous PubMed (Misc)	-	6 Publications

## Product Specific Information

**Description:** Interleukin-17A (IL-17A) is a CD4+ T cell-derived cytokine that promotes inflammatory responses in cell lines and is elevated in rheumatoid arthritis, asthma, multiple sclerosis, psoriasis, and transplant rejection. The cDNA encoding human IL-17A was isolated from a library of CD4+ T cells; the encoded protein exhibits 72 percent amino acid identity with HVS13, an open reading frame from a T lymphotropic Herpesvirus saimiri, and 63 percent with mouse CTLA-8 (cytotoxic T-lymphocyte associated antigen-8). Human IL-17A exists as glycosylated 20-30 kD homodimers. High levels of IL-17A homodimer are produced by activated peripheral blood CD4+ T-cells. IL-17A enhances expression of the intracellular adhesion molecule-1 (ICAM-1) in human fibroblasts. Human IL-17A also stimulates epithelial, endothelial, or fibroblastic cells to secrete IL-6, IL-8, G-CSF, and PGE2. In the presence of human IL-17A, fibroblasts can sustain the proliferation of CD34+ hematopoietic progenitors and induce maturation into neutrophils. Mouse, rat, and human IL-17A can induce IL-6 secretion in mouse stromal cells, indicating that all homologs can recognize the mouse receptor. IL-17A binds to a receptor that binds also to HVS13 (viral IL-17A) and to CTLA-8.

**Applications Reported:** Recombinant mouse IL-17A is biologically active and can promote IL-6 production in vitro. Recombinant mouse IL-17A is useful as an ELISA standard.

**Applications Tested:** The recombinant mouse IL-17A has been tested as the standard in a mouse IL-17 sandwich ELISA and in bioassay for induction of IL-6 production by NIH/3T3 cells. The ED50 is 3.0 ng/mL, corresponding to a specific activity of 3.3 x 10<sup>5</sup> Units/mg.

**Source:** E. coli expressed amino acids Thr 22-Ala 158 of mature mouse IL-17A accession # NM\_010552.

**Bioactivity:** Measured by induction of IL-6 production by NIH/3T3 cells. The ED50 is 3.0 ng/mL, corresponding to a specific activity of 3.3 x 10<sup>5</sup> Units/mg.

**Endotoxin:** Less than 0.01 ng/ug cytokine as determined by the LAL assay. Purity: >98% as determined by SDS-PAGE.

**Molecular Weight:** The protein does not contain an N-terminal methionine. The polypeptide has a predicted molecular mass of 15,377. The DTT reduced protein migrates as a 15 kDa polypeptide. The nonreduced cystine linked protein migrates as a 30 kDa protein on non-reducing SDS-PAGE.

**Storage and handling:** For best recovery, quick-spin vial prior to opening. Use in a sterile environment.

Purity: Greater than 90%, as determined by SDS-PAGE.

Aggregation: Less than 10%, as determined by HPLC.

Filtration: 0.2 µm post-manufacturing filtered.

 6 References

Miscellaneous PubMed (6)

<p>Frontiers in immunology</p> <p><b>p40 -Deficient Mice Exhibit Impaired Bacterial Clearance and Enhanced Pro-inflammatory Responses during <i>Salmonella enterica</i> serovar Typhimurium Infection.</b></p> <p>Authors: Li Y,Lv M,Su C,Long S,Zhang W,Conway KL,Li W,Xavier RJ,Shi HN</p>	<p>Year 2019</p>
<p>Hypertension (Dallas, Tex. : 1979)</p> <p><b>Mitochondrial Cyclophilin D in Vascular Oxidative Stress and Hypertension.</b></p> <p>Authors: Itani HA,Dikalova AE,McMaster WG,Nazarewicz RR,Bikineyeva AT,Harrison DG,Dikalov SI</p>	<p>Year 2016</p>

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