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## Human IL-17A Recombinant Protein

**Catalog Number:** 14-8179

**Also known as:** Interleukin-17A, IL17A

**RUO: For Research Use Only. Not for use in diagnostic procedures.**

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### Product Information

**Contents:** Human IL-17A Recombinant Protein

 **Catalog Number:** 14-8179

**Handling Conditions:** For best recovery, quick-spin vial prior to opening. Use in a sterile environment

**Source:** E. coli expressed amino acids ile 20-ala 155 of mature human IL-17A accession # NM\_002190

**Molecular Mass:** The methionylated polypeptide has a predicted molecular mass of 15,666. The DTT reduced protein migrates as a 15 kDa polypeptide. The protein is a cystine linked homodimer and migrates as a 27 kDa protein on non-reducing SDS-PAGE.

**Purity:** > 98% as determined by SDS-PAGE

**Endotoxin:** Less than 0.01 ng/ug cytokine as determined by the LAL assay.

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

**Formulation:** Sterile liquid: 0.1 M glycine with 1% BSA, pH 3.0

**Temperature Limitation:** Store at less than or equal to -70°C.

**Batch Code:** Refer to vial

**Use By:** Refer to vial



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### 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-17) and to CTLA-8.

This recombinant protein is *E. coli* expressed. Insect cell expressed Human IL-17A Recombinant Protein (cat. 14-8180) is also available.

### Applications Reported

Human IL-17A Recombinant Protein is biologically active.

### Applications Tested

The recombinant human IL-17A has been tested as the standard in a human IL-17A sandwich ELISA and in bioassay for induction of IL-6 production by NHDF cells. The ED<sub>50</sub> is 0.5-5 ng/ml, corresponding to a specific activity of 2 x 10<sup>6</sup> - 2 x 10<sup>5</sup> Units/mg.

### References

Dong C. Regulation and pro-inflammatory function of interleukin-17 family cytokines. *Immunol Rev.* 2008 Dec; 226: 80-6.

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Gaffen SL. An overview of IL-17 function and signaling. *Cytokine*. 2008 Sep; 43(3): 402-7.

Roark CL, Simonian PL, Fontenot AP, Born WK, O'Brien RL. gammadelta T cells: an important source of IL-17. *Curr Opin Immuno*. 2008 Jun; 20(3): 353-7

### Related Products

13-7179 Anti-Human IL-17A Biotin (eBio64DEC17)

14-7178 Anti-Human IL-17A Purified (eBio64CAP17)

88-7876 Human IL-17A ELISPOT Ready-SET-Go!®

88-7976 Human IL-17A (Interleukin-17A, IL17A) ELISA Ready-SET-Go! Kit (See replacement item BMS2017)

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