

# Interleukin-17

## Human, Recombinant (rHuIL-17)

Expressed in *E. coli*

Cat. No. CRP0837

Lot. No. (See product label)

### PRODUCT INFORMATION

**Description:** The originally described IL-17 protein, now known as IL-17A, is a homodimer of two 132 amino acid chains, secreted by activated T-cells that act on stromal cells to induce production of proinflammatory and hematopoietic bioactive molecules. Today, 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. IL-17A exhibits cross-species bioactivity between human and murine cells.

**Amino-Acid Sequence:** a disulfide-linked homodimer of two 136 amino acid polypeptide chains.

**M. W. :** 31.0kDa

**Recombinant:** Expressed in *E. coli*

**Purity:** >95% as determined by SDS-PAGE.

**Formulation:** Sterile filtered lyophilized powder, with 20mM Citrate, 0.1M NaCl, pH4.5.

**Specific Activity:** The ED50 as determined by the dose-dependent induction of IL-6 in Hs68 cell line was found to be approximately 2ng/ml, corresponding to a specific activity of  $5.0 \times 10^5$  IU/mg.

**Endotoxin:** Less than 1 IEU/ $\mu$ g determined by LAL test.

**Reconstitution:** It is recommended to reconstitute the lyophilized rHuIL-17 in sterile 18M $\Omega$ -H<sub>2</sub>O containing at least 0.1% human serum albumin or bovine serum albumin to prepare a stock solution of no less than 100ug/ml of the cytokine.

**Storage:** Lyophilized rHuIL-17 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuIL-17 should be stored at 4°C between 2-7 days and for future use below -18°C. Aliquot to avoid repeated freeze-thaw cycles.

### FOR RESEARCH USE ONLY

### GENE INFORMATION

**Gene Name:** [IL17A](#)

**Gene Alias:** IL17,CTLA-8, IL-17, IL-17A, Cytotoxic T-lymphocyte-associated antigen 8

**Gene Type:** protein coding

**mRNA Refseq:** [NM\\_002190](#)

**Protein Refseq:** [NP\\_002181](#)

**MIM:** [603149](#)

**GeneID:** [3605](#)

**UniProt ID:** [Q16552](#)

**Chromosome Location:** 6p12

**Pathway:** Cytokine-cytokine receptor interaction

**Function:** Induces stromal cells to produce proinflammatory and hematopoietic cytokines. Enhances the surface expression of the intracellular adhesion molecule-1 (ICAM-1) in fibroblasts.

**Summary:** The protein encoded by this gene is a proinflammatory cytokine produced by activated T cells. This cytokine regulates the activities of NF-kappaB and mitogen-activated protein kinases. This cytokine can stimulate the expression of IL6 and cyclooxygenase-2 (PTGS2/COX-2), as well as enhance the production of nitric oxide (NO). High levels of this cytokine are associated with several chronic inflammatory diseases including rheumatoid arthritis, psoriasis and multiple sclerosis.

### REFERENCES

1. Gaffen SL (2005). "Biology of recently discovered cytokines: interleukin-17--a unique inflammatory cytokine with roles in bone biology and arthritis.". *Arthritis Res. Ther.* 6 (6): 240-7.
2. Lubberts E, Koenders MI, van den Berg WB (2006). "The role of T-cell interleukin-17 in conducting destructive arthritis: lessons from animal models.". *Arthritis Res. Ther.* 7 (1): 29-37.
3. Yao Z, Painter SL, Fanslow WC, et al. (1996). "Human IL-17: a novel cytokine derived from T cells.". *J. Immunol.* 155 (12): 5483-6.

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