

Mouse IL-17A Recombinant Protein

Catalog Number: 14-8171

Also Known As: Interleukin-17A, IL17A

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

Product Information

Contents: Mouse IL-17A Recombinant Protein

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

Source: E. coli expressed amino acids thr 22-ala 158 of mature mouse IL-17A (accession # NM_010552).

Molecular Mass: 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.

Purity: Greater than 98% as determined by SDS-PAGE

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

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 10⁵ Units/mg.

Formulation: Sterile liquid; 0.1 M glycine, 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

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 10⁵ Units/mg.

References

- Fossiez, F., et al. 1996. T cell interleukin-17 induces stromal cells to produce proinflammatory and hematopoietic cytokines. *J. Exp. Med.* 183: 2593-2603.
- Kennedy, J., et al. 1996. Mouse IL-17: A cytokine preferentially expressed by alpha beta TCR+CD4 -CD8 - T cells. *J. Interferon Cytokine Res.* 16: 611-617.
- Hurst, S., et al. 2002. New IL-17 family members promote Th1 or Th2 responses in the lung: in vivo function of the novel cytokine IL-25. *J. Immunol.* 169: 443-453.

Related Products

88-7176 Human IL-17A (homodimer) ELISA Ready-SET-Go!®

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