

Cytokines

Mouse Recombinant IL-17A



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Catalog # 78033.1
78033

25 µg
100 µg

Product Description

Interleukin 17A (IL-17A) is the founding member of the family of cytokines that includes IL-17B through IL-17F. It is a potent proinflammatory cytokine that plays a key role in defense against pathogens. IL-17A and IL-17F signal as homodimers or heterodimers through the same receptor, and activate NF-κB, MAPK, and C/EBP pathways (Gaffen). IL-17A receptor is expressed on a variety of cell types, including hematopoietic cell compartments. IL-17A is produced by Th17 cells, CD8+ T cells, γδ T cells, natural killer (NK) T cells, B cells, neutrophils, innate lymphoid cells, and mesenchymal stromal cells (MSCs) (Zenobia & Hajishengallis; Mojsilovic et al.). IL-17A receptor is expressed at particularly high levels on stromal cells, including MSCs. IL-17A increases the frequency and the average size of fibroblast colony-forming units (CFU-F) derived from bone marrow, as well as the proliferation of bone marrow-derived MSCs. IL-17A suppresses osteogenic differentiation and bone formation of bone marrow-derived MSCs. The action of IL-17A on hematopoiesis is deeply reliant on the microenvironment and the induction of other regulators. In healthy mouse bone marrow, IL-17A stimulates myeloid and early stage erythroid progenitor cells but inhibits late stage erythroid progenitor cells (Mojsilovic et al.).

Product Information

Alternative Names: CTLA-8, IL-17, Interleukin-17, Interleukin-17A
Accession Number: Q62386
Amino Acid Sequence: MAAIIPQSSA CPNTEAKDFL QNVKVNLIKVF NSLGAKVSSR RPSDYLNIRST SPWTLHRNED PDRYPSVIWE AQCRHQRCVN AEGKLDHHMN SVLIQQEILV LKREPESCPF TFRVEKMLVG VGCTCVASIV RQAA
Predicted Molecular Mass: 30.2 kDa
Species: Mouse
Cross Reactivity: Human, Rat
Formulation: Lyophilized from a sterile-filtered solution containing 0.1% trifluoroacetic acid.
Source: E. coli

Specifications

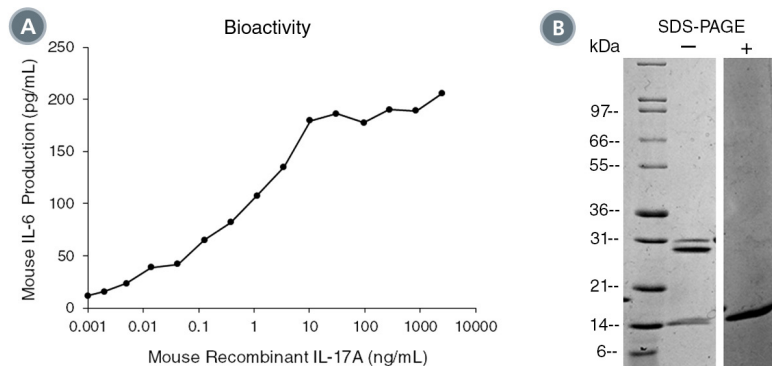
Activity: The specific activity is $\geq 2 \times 10^5$ units/mg ($EC_{50} \leq 5$ ng/mL) as determined by the production of IL-6 by NIH 3T3 fibroblasts.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage: Store at -20°C to -80°C.
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Mouse Recombinant IL-17A was tested by its ability to produce IL-6 in NIH 3T3 cells. Production of mouse IL-6 was measured after 48 hours of culture. The EC50 is defined as the effective concentration of the growth factor at which IL-6 production is at 50% of maximum. The EC50 in the above example is 0.3 - 1.5 ng/mL.

(B) 1 μ g of Mouse Recombinant IL-17A was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant IL-17A is a homodimer of 15.1 kDa subunits with a predicted total molecular mass of 30.2 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

- Mojilović S et al. (2015) Interleukin-17 and its implication in the regulation of differentiation and function of hematopoietic and mesenchymal stem cells. *Mediators Inflamm* 2015: 470458.
- Zenobia C & Hajishengallis G. (2015) Basic biology and role of interleukin-17 in immunity and inflammation. *Periodontol* 2000 69(1): 142–59.

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