

Cytokines

Mouse Recombinant IL-13



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Interleukin 13

Catalog # 78030.1
78030

10 µg
100 µg

Product Description

Interleukin 13 (IL-13) is a type I cytokine, and signals through type I cytokine receptors to activate JAK/STAT and IRS-1/IRS-2 pathways. IL-13 is produced by T cells and innate lymphoid cells (Pulendran & Artis) and it inhibits production of pro-inflammatory cytokines, prostaglandins, and reactive oxygen and nitrogen species by monocytes and macrophages (Hershey). Unlike human B cells, IL-13 has no effect on mouse B cell development and function. IL-13 promotes eosinophil survival, activation, and recruitment, and also activates mast cells (Hershey). IL-13 regulates gastrointestinal parasite expulsion, airway hyperresponsiveness, allergic inflammation, tissue eosinophilia, goblet cell hyperplasia, intracellular parasitism, tissue remodeling, tumor cell growth, and fibrosis. IL-13 induces hypercontractility of smooth muscles by directly acting on the muscle cells as well as the enteric nerves (Wynn).

Product Information

Alternative Names: Interleukin-13, NC30
Accession Number: P20109
Amino Acid Sequence: MPVPRSVSLP LTLKELIEEL SNITQDQTP L CNGSMVWSVD LAAGGFCVAL DSLTNISNCN AIYRTQRILH GLCNRKAPTT VSSLPDTKIE VAHFITKLLS YTKQLFRHGP F
Predicted Molecular Mass: 12.3 kDa
Species: Mouse
Cross Reactivity: Human, Rat
Formulation: Lyophilized from a sterile-filtered solution containing 0.1% trifluoroacetic acid.
Source: E. coli

Specifications

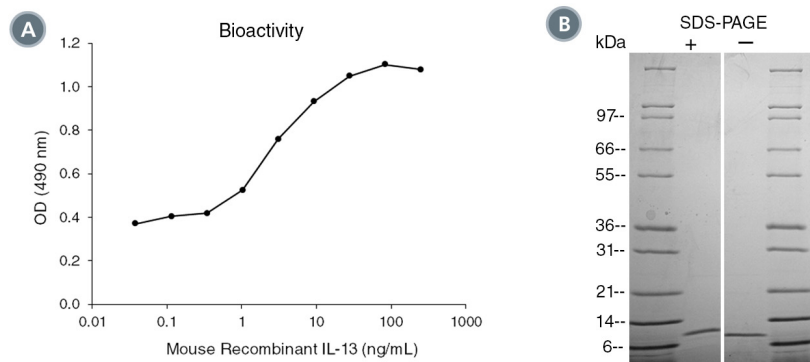
Activity: The specific activity is $\geq 1 \times 10^5$ units/mg ($EC_{50} \leq 0.01$ µg/mL) as determined by a cell proliferation assay using TF-1 cells.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

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 20 mM hydrochloric acid 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-13 was tested by its ability to promote the proliferation of TF-1 cells. Cell proliferation was measured after 66 hours of culture using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC₅₀ in the above example is 2.3 - 3.4 ng/mL.

(B) 1 µg of Mouse Recombinant IL-13 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant IL-13 has a predicted molecular mass of 12.3 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

- Hershey GKK. (2003) IL-13 receptors and signaling pathways: An evolving web. *J Allergy Clin Immunol* 111(4): 677–90.
- Pulendran B & Artis D. (2012) New paradigms in type 2 immunity. *Science* 337(6093): 431–5.
- Wynn TA. (2003) IL-13 effector functions. *Annu Rev Immunol* 21: 425–56.

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