



User Manual

Interleukin-13 (IL-13) (Human)

Cat. No. HEILP-13013

Description:

Human Interleukin-13 (IL-13) is expressed by the IL13 gene located on the chromosome 5 and secreted by many cell types, especially T helper type 2 (Th2) cells. The high resolution structure of IL-13 reported to be a monomer with two internal disulfide bonds that contribute to a bundled four α -helix configuration. Targeted deletion of IL-13 in mice resulted in impaired Th2 cell development and indicated an important role for IL-13 in the expulsion of gastrointestinal parasites. IL-13 exerts anti-inflammatory effects on monocytes and macrophages and it inhibits the expression of inflammatory cytokines such as IL-1 β , TNF- α , IL-6 and IL-8. IL-13 has also been shown to enhance B cell proliferation and to induce isotype switching resulting in increased production of IgE. Human, mouse and rat IL-13 share low homology, but have cross species activity.

Source:

Escherichia coli

Unit:

1 mg

Reconstitution:

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $< -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Formulation:

Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4 with trehalose.

Storage:

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

Molecular Weight:

Approximately 12.5 kDa, a single non-glycosylated polypeptide chain containing 112 amino acids.

Endotoxin:

Less than 1 EU/μg of IL-13 as determined by LAL method.

Usage:

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

Biological Activity:

The ED50 determined by a cell proliferation assay using human TF-1 cells is less than 1 ng/mL, corresponding to a specific activity of $> 1.0 \times 10^6$ IU/mg.

Physical Appearance:

Sterile filtered white lyophilized (freeze-dried) powder.

AA Sequence:

GPVPPSTALR ELIEELVNIT QNQKAPLCNG SMVWSINLTA GMYCAALES
L INVSGCSAIE KTQRMLSGFC PHKVSAGQFS SLHVRDTKIE VAQFVKDLLL

HLKKLFREGR FN

Purity:

> 97% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.

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