



User Manual

Interleukin-3 (IL-3) (Human)

Cat. No. HEILP-03013

Description:

Interleukin-3 is a pleiotropic factor produced primarily by activated T cells that can stimulate the proliferation and differentiation of pluripotent hematopoietic stem cells as well as various lineage committed progenitors. In addition, IL-3 also affects the functional activity of mature mast cells, basophils, eosinophils and macrophages. Because of its multiple functions and targets, it was originally studied under different names, including mast cell growth factor P-cell stimulating factor, burst promoting activity, multicolony stimulating factor, thy-1 inducing factor and WEHI-3 growth factor. In addition to activated T cells, other cell types such as human thymic epithelial cells, activated murine mast cells, murine keratinocytes and neurons/astrocytes can also produce IL-3. At the amino acid sequence level, mature human and murine IL-3 share only 29% sequence identity. Consistent with this lack of homology, IL-3 activity is highly species-specific and human IL-3 does not show activity on murine cells.

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°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.

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 15 kDa, a single non-glycosylated polypeptide chain containing 133 amino acids.

Endotoxin:

Less than 1 EU/μg of IL-3 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 0.1 ng/mL, corresponding to a specific activity of $> 1.0 \times 10^7$ IU/mg.

Physical Appearance:

Sterile filtered white lyophilized (freeze-dried) powder.

AA Sequence:

APMTQTTSK TSWVNCSNMI DEIITHLKQP PLPLLDFFNNL NGEDQDILME
NNLRRPNLEA FNRAVKSLQN ASAIESILKN LLPCLPLATA APTRHPIHIK
DGDWNEFRRK LTFYLKTLEN AQAQQTTLSL AIF

Purity:

> 96% 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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