



## User Manual

**Interleukin-15 (IL-15) (Human)**

**Cat. No. HEILP-15012**

**Description:**

Human Interleukin-15 (IL-15) is expressed by the IL15 gene located on the chromosome 4. It shares approximately 97% and 73% sequence identity with simian and murine IL-15, respectively. Both human and simian IL-15 are active on murine cells. IL-15 is secreted by mononuclear phagocytes (and some other cells), especially macrophages following infection by virus. It possesses a variety of biological functions, including stimulating and maintaining of cellular immune responses, especially regulating T and natural killer (NK) cell activation and proliferation. In additionally, it shares many biological properties with IL-2, including T, B and NK cell-stimulatory activities. IL-15 signals through a complex composed of IL-2/IL-15 receptor beta chain. Although IL-15 lacks sequence homology with IL-2, it has recently been shown that both the beta and gamma chains of the IL-2 receptor are utilized for IL-15 binding and signaling. In addition, an IL-15 specific binding protein has also been cloned from a mouse T cell clone.

**Source:**

*Escherichia coli*

**Unit:**

10 µg

**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 12.9 kDa, a single non-glycosylated polypeptide chain containing 114 amino acids.

**Endotoxin:**

Less than 1 EU/μg of IL-15 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 murine CTLL-2 cells is less than 0.5 ng/mL, corresponding to a specific activity of  $> 2.0 \times 10^6$  IU/mg.

**Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

**AA Sequence:**

NWVNVISDL KKIEDLIQSM HIDATLYTES DVHPSCKVTA MKCFLLELQV ISLESGDASI  
HDTVENLIIL ANNSLSSNGN VTESGCKECE ELEEKNIKEF LQSFVHIVQM FINTS

**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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