



## User Manual

**Interleukin-33 (IL-33) (Human)**

**Cat. No. HEILP-33011**

**Description:**

Interleukin-33 (IL-33), also known as NFHEV and DVS 27, is a 30 kDa proinflammatory protein that may also regulate gene transcription. IL33 is constitutively expressed in smooth muscle and airway epithelia. It is upregulated in arterial smooth muscle, dermal fibroblasts, and keratinocytes following IL1 $\alpha$  or IL1 $\beta$  stimulation. IL-33 shares structural and functional characteristics with the IL-1 cytokine family. It binds and signals through the IL-1RL1/ST2 receptor activating NF-kappaB and MAP kinases. IL-33 induces production of TH2 cell related cytokines, including IL-4, IL-5 and IL-13, and exerts multiple inflammation related bioactivities.

**Source:**

*Escherichia coli*

**Unit:**

2  $\mu$ g

**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  $\mu$ m filtered concentrated solution in 20 mM PB, 150 mM NaCl, 1 mM EDTA, 2 mM  $\beta$ -Mercaptoethanol, 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 17.9 kDa, a single non-glycosylated polypeptide chain containing 159 amino acids.

### **Endotoxin:**

Less than 1 EU/μg of IL-33 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 D10S cells is less than 0.05 ng/mL, corresponding to a specific activity of  $> 2.0 \times 10^7$  IU/mg.

### **Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

### **AA Sequence:**

SITGISPIT EYLASLSTYN DQSITFALED ESYEIYVEDL KKDEKKDKVLLSYYESQHPS NE  
SGDGVDPGK MLMVTLSPK DFWLHANNKE HSVELHKCEKPLPDQAFFVL  
HNMHSNCVSF ECKTDPGVFI GVKDNHLALI KVDSSENLCT ENILFKLSET

**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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