



## User Manual

**Interleukin-31 (IL-31) (Human)**

**Cat. No. HEILP-31011**

**Description:**

Human Interleukin-31 (IL-31) is a T-cell derived cytokine that shares several structural and functional characteristics with IL-6, Oncostatin M, LIF, and Cardiotrophin-1. It signals through a receptor complex comprised of GPL (GP130-like, IL-31RA) and OSMR (Oncostatin M receptor). GPL/OSMR signaling is a strong activator of STAT3 and STAT5, and can also activate STAT1, Jak1, and Jak2 signaling pathways. IL-31 regulated immune responses have been implicated in skin physiology and inflammatory skin diseases.

**Source:**

*Escherichia coli*

**Unit:**

2 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, pH7.4.

**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 15.8 kDa, a single non-glycosylated polypeptide chain containing 141 amino acids.

**Endotoxin:**

Less than 1 EU/ $\mu$ g of IL-31 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 specific activity is determined by inducing STAT3 activation using human U-87 MG cells. 5 ng/mL of IL31 can effectively induce STAT3 activation.

**Physical Appearance:**

Sterile filtered white lyophilized (freeze-dried) powder.

**AA Sequence:**

SHTLPVRLLR PSDDVQKIVE ELQSLSKMLL KDVEEEKGVL VSQNYTLPCL  
SPDAQPPNNI HSPAIRAYLK TIRQLDNKSV IDEIIEHLDK LIFQDAPETN ISVPTDTHC  
KRFILTISQQ FSECMDLALK SLTSGAQQAT T

**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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