

## Overview

<b>Description</b>	Human 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.
<b>Species</b>	Human
<b>Source</b>	<i>E. coli</i>
<b>Biological Activity</b>	Fully biologically active when compared to standard. The specific activity is determined by inducing STAT3 activation using human U-87 MG cells. 5 ng/mL of rHuIL-31 can effectively induce STAT3 activation.
<b>Sequence</b>	SHTLPVRLLR PSDDVQKIVE ELQSLSKMLL KDVEEEKGVL VSQNYTLPCL SPDAQPPNNI HSPAIRAYLK TIRQLDNKSV IDEIIEHLDK LIFQDAPETN ISVPTDTHC KRFLITISQQ FSECMDLALK SLTSGAQQAT T

## Properties

<b>Measured Molecular Weight</b>	Approximately 15.8 kDa, a single non-glycosylated polypeptide chain containing 141 amino acids.
<b>Purity</b>	> 97 % by SDS-PAGE and HPLC analyses.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH7.4.
<b>Reconstitution</b>	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 d -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Endotoxin Level</b>	Less than 1 EU/µg of rHuIL-31 as determined by LAL method.
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Usage</b>	This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.
<b>Storage</b>	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. <b>Avoid repeated freeze/thaw cycles.</b>

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