

Recombinant Human Interleukin-31 (Human IL-31)

Product Information

Product Name	Cat#	Size
Recombinant Human Interleukin-31 (Human IL-31)	90122ES10	10 µg
	90122ES60	100 µg
	90122ES76	500 µg

Product Description

Human Interleukin-31 (IL-31) is a 24 kDa, short-chain member of the alpha-helical family of cytokines. The human IL-31 cDNA encodes a 164 amino acid (aa) precursor that contains a 23 aa signal peptide and a 141 aa mature protein. The mature region shows four alpha-helices which would be expected to show a typical up-up-down-down topology. Human and mouse IL-31 share 24% aa sequence identity in the mature region. IL-31 is mainly associated with activated T cells and preferentially expressed by Th2 rather than Th1 cells. IL-31 signals via a heterodimeric receptor complex composed of a 120 kDa, gp130-related molecule termed IL-31 RA (also GPL and GLM-R) and the 180 kDa oncostatin M receptor (OSM R beta). In the complex, IL-31 directly binds to GPL, not OSM R. IL-31 signaling has been shown to involve the Jak/STAT pathway, the PI3 kinase/AKT cascade, and the MAP kinase pathway. Although multiple isoforms of IL-31 RA are known, only a form that contains the entire length of the cytoplasmic domain is signaling-capable. The IL-31 receptor is constitutively expressed by keratinocytes and up-regulated by IFN-gamma on monocytes. Studies using transgenic mice indicate that IL-31 may contribute to the pruritis (itching) associated with nonatopic dermatitis.

Product Properties

Synonyms	IL-31
Accession	Q6EBC2
GeneID	386653
Source	E.coli-derived human IL-31 protein, Ser24-Thr164.
Molecular Weight	Approximately 15.8 kDa.
AA Sequence	SHTLPVRLLR PSDDVQKIVE ELQSLSKMLL KDVEEEKGVL VSQNYTLPLCL SPDAQPPNNI HSPAIRAYLK TIRQLDNKSV IDEIIEHLDK LIFQDAPETN ISVPTDTHEC KRFILTISQQ FSECMDLALK SLTSGAQQAT T
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 97% by SDS-PAGE and HPLC analyses.
Biological Activity	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.
Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4. We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
Reconstitution	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.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only.