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# SCIENTIFIC

## IL 31 Human

**Description:**IL-31 human recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 141 amino acids (24-164 a.a.) and having a molecular mass of 15.8 kDa.

Synonyms:Interleukin 31, IL31, IL-31.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence:SHTLPVRLLR PSDDVQKIVE ELQSLSKMLL KDVEEEKGVL VSQNYTLPCL SPDAQPPNNI HSPAIRAYLK TIRQLDNKSV IDEIIEHLDK LIFQDAPETN ISVPTDTHEC KRFILTISQQ FSECMDLALK SLTSGAQQAT T.

**Purity:**Greater than 95.0% as determined by(a) Analysis by SEC-HPLC.(b) Analysis by SDS-PAGE.

#### Formulation:

The IL-31 (1mg/ml) was lyophilized with 20mM Phosphate buffer, 150mM NaCl pH-7.4.

#### Stability:

Lyophilized IL-31 Recombinant although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-31 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. They may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

# Solubility:

It is recommended to reconstitute the lyophilized IL-31 in sterile 18M-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

## Introduction:

IL-31 produced by activated Th2-type T cells, cooperates with a heterodimeric receptor consisting of IL-31 Receptor Anatagonist and Onconstatin-M Receptor that is continuesly expressed on epithelial cells and keratinocytes. IL-31 plays a role in the promotion of allergic skin disorders and in regulating other allergic diseases, such as asthma. IL-31 is involved in the itching sensation and endorses the scratching behavior in NC/Nga mice with atopic dermatitis. IL-31 expression is connectd with CLA(+) T cells and contributes to the development of atopic dermatitis-induced skin inflammation and pruritus. IL-31 is a powerful inducer of proinflammatory mediators in human colonic SEMFs. IL-31 takes part as a proinflammatory cytokine derived from Th2 cells. Serum IL-31 level is higher in patients with atopic dermatitis. IL-31 is involved in a broad range of immune- & non-immune cells & possesses potential pleiotropic physiological functions, including regulating hematopoiesis & immune response, causing inflammatory bowel disease, airway hypersensitivity & dermatitis.

#### **Biological Activity:**







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The ED50 was determined by its ability to activate STAT following receptor ligand interaction and found to be

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