



Interleukin-31, human recombinant (rHuIL-31)

Catalog No: 97227
Lot No: XXXXX
Source: *E. coli*
Synonyms: Interleukin 31, IL31, IL-31

Background

IL-31 produced by activated Th2-type T cells, cooperates with a heterodimeric receptor consisting of IL-31 Receptor Anatagonist and Oncostatin-M Receptor that is continuously 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 connected 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.

Description

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

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

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

Solubility

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

Stability

Lyophilized IL-31, 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.

Purity

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

Amino Acid Sequence

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

Activity

The ED₅₀ was determined by its ability to activate STAT following receptor ligand interaction and found to be <5 ng/ml, corresponding to a specific activity of 200,000 units.

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