Recombinant Human Interleukin-31 (rh IL-31)

Synonyms: none

Introduction: IL-31 produced by activated Th2-type T cells, cooperates with a heterodimeric receptor consisting of IL-31 Receptor Antagonist and Onconstatin-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 and 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- and non-immune cells and possesses potential pleiotropic physiological functions -including regulating hematopoiesis and immune response- causing inflammatory bowel disease, airway hypersensitivity and dermatitis.

Description: Recombinant human Interleukin-31 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.

Source: Escherichia Coli

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilised from a 0.22 µm filtered solution in PBS pH 7.4
The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rh IL-31 in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh IL-31 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rh IL-31 should be stored at 4°C between 2-7 days, for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Amino Acid Sequence: SHTLPVRLLR PSDDVQKIVE ELQSLSKMLL KDVEEKEGVL VSQNYTLPCLSPDQAOPPNNI HSPAIRAYLK TIRQLDNKSV IDEIIEHLDK LIFQDAPETN ISVPTDTHEC KRFILTISQQ FSECMDLALK SLTSGAQQAT T.

Purity: Greater than 95.0% as determined by SDS-PAGE.

Endotoxicity: The endotoxin level is less than 1 EU / µg determined by LAL method.

Biological 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/mg.

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