

## Recombinant Human IL-31

CATALOG #:	4983-10	10 µg
	4983-1000	1 mg
LOT #:	_____	
SYNONYMS:	Interleukin 31, IL31, IL-31	
SOURCE:	<i>E. coli</i>	
PURITY:	> 95 % by SDS-PAGE and SEC-HPLC	
FORM:	Lyophilized from 20 mM phosphate buffer, 150 mM NaCl, pH 7.4	

**RECONSTITUTION:**

Centrifuge the vial prior to opening. Reconstitute in sterile ddH<sub>2</sub>O to a concentration ≥ 100 µg/ml. This solution can then be diluted into other aqueous buffers.

**STORAGE CONDITIONS:**

The lyophilized protein is best-stored desiccated at -20°C. Reconstituted human IL-31 should be stored at 4°C for 2-7 days and at -20°C for future use. Avoid freeze/thaw cycles.

**DESCRIPTION:**

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

**BIOLOGICAL ACTIVITY:**

The ED<sub>50</sub> 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.

**AMINO ACID SEQUENCE:**

SHTLPVRLLRPSDDVQKIVEELQSLSKMLLKDVVEEEKGVLVSQNYTLPCLSFDAQPPNNIHSPA  
IRAYLKTIKRLDNKSVIDEIIEHLDKLIFQDAPETNISVPTDTHECKRFILTSQQFSECMDLALK  
SLTSGAQQATT

**FOR RESEARCH USE ONLY! Not to be used in humans.**

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