

Recombinant Human IL-31

Information

Gene ID	386653
Accession #	Q6EBC2
Alternate Names	Interleukin-31; IL-31; IL31
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 15.8 kDa, a single non-glycosylated polypeptide chain containing 141 amino acids.
AA Sequence	SHTLPVRLLR PSDDVQKIVE ELQSLSKMLL KDVEEEKGVL VSQNYTLPCLS SPDAQPPNNI HSPAIRAYLK TIRQLDNKSV IDEIIEHLDK LIFQDAPETN ISVPTDTHC KRFILTISQQ FSECMDLALK SLTSGAQQAT T
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70°C as supplied. - 1 month, 2 to 8°C under sterile conditions after reconstitution. - 3 months, -20 to -70°C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. 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.
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.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 µg	100 µg	500 µg
Recombinant Human IL-31	10 µg	100 µg	500 µg

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Quality Control

Purity	>97% by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuIL-31 as determined by LAL method.

Description

Human IL-31 gene is located on Chr.12. It expresses the IL-31 protein at low levels in the type 2 helper T cells, which exists in testis, bone marrow, skeletal muscle, kidney, colon, thymus, small intestine and trachea. This protein shares several structural and functional characteristics with IL-6, Oncostatin M, LIF, and Cardiotrophin-1. IL-31 signals through IL-31 receptor A and oncostatin M receptor subunits and can activate STAT3 through receptors and maybe involve in skin immunity. It regulated immune responses have been implicated in skin physiology and inflammatory skin diseases. Human IL-31 shares 24 % a.a. sequence identity in the mature protein with mouse IL-31.

Reference

1. Sonkoly E, Muller A, Lauerma AI, et al. 2006. J Allergy Clin Immunol, 117: 411-7.
2. Jawa RS, Chattopadhyay S, Tracy E, et al. 2008. J Interferon Cytokine Res, 28: 207-19.
3. Takaoka A, Arai I, Sugimoto M, et al. 2005. Eur J Pharmacol, 516: 180-1.
4. Ohmatsu H, Sugaya M, Suga H, et al. 2012. Acta Derm Venereol, 92: 282-3.

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