

## 32-7045: Recombinant Human Interleukin-31/IL-31

**Gene :** IL31  
**Gene ID :** 386653  
**Uniprot ID :** Q6EBC2

### Description

Source: E. coli.

MW :15.8kD.

Recombinant Human Interleukin-31 is produced by our E.coli expression system and the target gene encoding Ser24-Thr164 is expressed. Human Interleukin 31 (IL-31) is a cytokine containing a four-helix bundle structure. It shares several structural and functional characteristics with IL-6, Oncostatin M, LIF, and Cardiotrophin-1. Human IL-31 cDNA encodes a 164 amino acid precursor that contains a 23 amino acid signal peptide and a 141 amino acid mature protein. Human and mouse IL-31 share 24% sequence identity in the mature region. IL-31 is mainly associated with activated T cells and is preferentially expressed by type 2 helper T cells (Th2). IL-31 signals via a heterodimeric receptor complex composed of a gp130 related molecule termed IL-31RA (also GPL and GLMR) and an Oncostatin M receptor (OSM R beta). The IL-31 receptor is constitutively expressed by keratinocytes and upregulated by IFN gamma on monocytes. GPL/OSMR signaling is a strong activator of STAT3 and STAT5, and can also activate STAT1, Jak1, and Jak2 signaling pathways. IL-31 regulated immune responses have been implicated in skin physiology and inflammatory skin diseases. Studies have shown that IL31 induces severe pruritis (itching) and dermatitis in transgenic mice.

### Product Info

**Amount :** 10 µg / 50 µg  
**Content :** Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH 7.4.  
**Storage condition :** Lyophilized protein should be stored at -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at -20°C for 3 months.  
**Amino Acid :** SHTLPVRLLRPSDDVQKIVEELQSLSKMLLKDVVEEKGVLVSQNYTLPCLSPPAQPPNNIHSPAIRAYLKTIKRLD  
NKSVIDEIIEHLDKLIFQDAPETNISVPTDTHECKRFILTISQQFSECMDLALKSLTSGAQQATT

### Application Note

Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100 µg/ml. Dissolve the lyophilized protein in ddH<sub>2</sub>O. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

**Endotoxin :** Less than 0.1 ng/µg (1 IEU/µg) as determined by LAL test.

**Biological Activity :** The ED<sub>50</sub> for this effect is less 5 ng/mL, measured by inducing STAT3 activation in U87 MG human glioblastoma/astrocytoma cells.