

## **Synonym**

IL-31,IL31,Interleukin-31

#### **Source**

Human IL-31 Protein, premium grade(IL1-H5219) is expressed from human 293 cells (HEK293). It contains AA Ser 24 - Thr 164 (Accession # Q6EBC2-1). Predicted N-terminus: Ser 24

Human IL-31 Protein, premium grade (IL1-H5219), designed for preclinical stage, has the same activity and performance with GMP Human IL-31, which enables a seamless transition from preclinical development to clinical phases. Premium Grade product offer a cost efficient alternative of GMP Grade products for the early development phase when safety of raw materials is not top priority. By using Premium Grade products in early development phase, you can transition easily into clinical and commercial phase without need to revalidate the raw materials and modify manufacturing process.

# **Molecular Characterization**

# IL-31(Ser 24 - Thr 164) Q6EBC2-1

This protein carries no "tag".

The protein has a calculated MW of 15.8 kDa. The protein migrates as 18-20 kDa when calibrated against <u>Star Ribbon Pre-stained Protein Marker</u> under reducing (R) condition (SDS-PAGE) due to glycosylation.

# Endotoxin

Less than 0.1 EU per µg by the LAL method.

## **Sterility**

The sterility testing was performed by membrane filtration method.

## Mycoplasma

Negative.

## **Purity**

>90% as determined by SDS-PAGE.

#### **Formulation**

Lyophilized from  $0.22~\mu m$  filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

#### Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

#### **Storage**

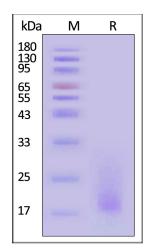
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

# SDS-PAGE



Human IL-31 Protein, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With <u>Star Ribbon Pre-stained Protein Marker</u>).

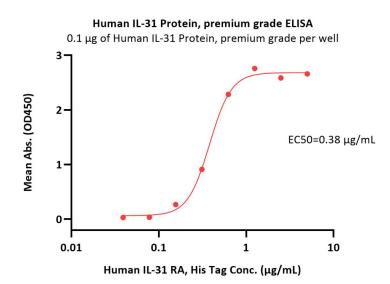
**Bioactivity-ELISA** 



# Human IL-31 Protein, premium grade

Catalog # IL1-H5219





Immobilized Human IL-31 Protein, premium grade (Cat. No. IL1-H5219) at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Human IL-31 RA, His Tag (Cat. No. ILA-H52H7) with a linear range of 0.156-2.5  $\mu$ g/mL (QC tested).

# Background

IL-31 is an inflammatory cytokine that helps trigger cell-mediated immunity against pathogens. Activates STAT3 and possibly STAT1 and STAT5 through the IL31 heterodimeric receptor composed of IL31RA and OSMR. It has also been identified as a major player in a number of chronic inflammatory diseases, including atopic dermatitis. May function in skin immunity. IL-31 is produced by a variety of cells, namely type 2 helper (TH2) T-cells. IL-31 sends signals through a receptor complex made of IL-31RA and oncostatin M receptor  $\beta$  (OSMR $\beta$ ) expressed in immune and epithelial cells. These signals activate three pathways: ERK1/2 MAP kinase, PI3K/AKT, and JAK1/2 signaling pathways.

# **Clinical and Translational Updates**

