



**Synonym**

IL-5, TRF, IL5, Interleukin-5

**Source**

Human IL-5 Protein, premium grade (IL5-H5214) is expressed from human 293 cells (HEK293). It contains AA Ile 20 - Ser 134 (Accession # [P05113-1](#)).

Predicted N-terminus: Ile 20

*Human IL-5 Protein, premium grade (IL5-H5214), designed for preclinical stage, has the same activity and performance with GMP Human IL-5 Protein, 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-5(Ile 20 - Ser 134)**  
**P05113-1**

This protein carries no "tag".

The protein has a calculated MW of 13.1 kDa. The protein migrates as 18 kDa±3 kDa under reducing (R) condition, and 36 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 0.01 EU per µg by the LAL method.

**Host Cell DNA**

<0.02 ng/µg of protein tested by qPCR.

**Sterility**

Negative

**Mycoplasma**

Negative.

**Purity**

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

**Formulation**

Lyophilized from 0.22 µm 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**

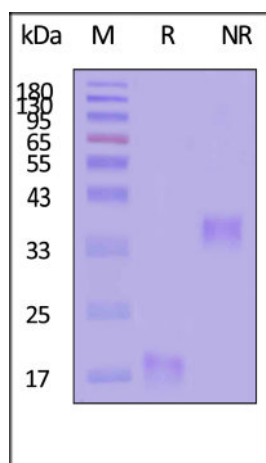
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

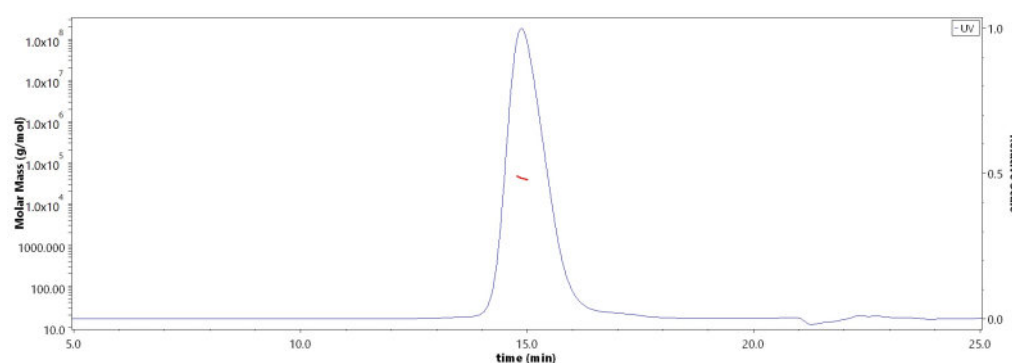
This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**



**SEC-MALS**



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# Human IL-5 Protein, premium grade

Catalog # IL5-H5214



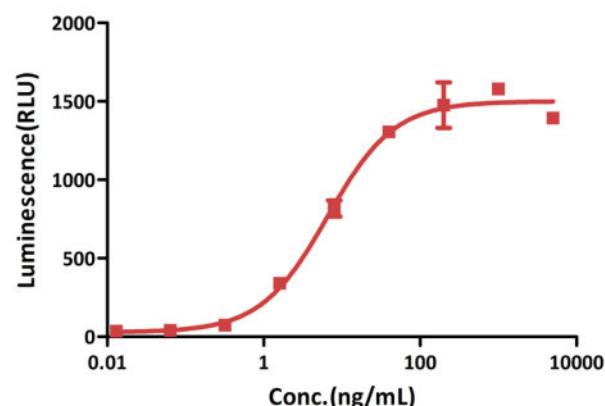
BIOSYSTEMS  
**Acro**  
Surprise Inside!

Human IL-5 Protein, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

The purity of Human IL-5 Protein, premium grade (Cat. No. IL5-H5214) is more than 95% and the molecular weight of this protein is around 36-45 kDa verified by SEC-MALS. [Report](#)

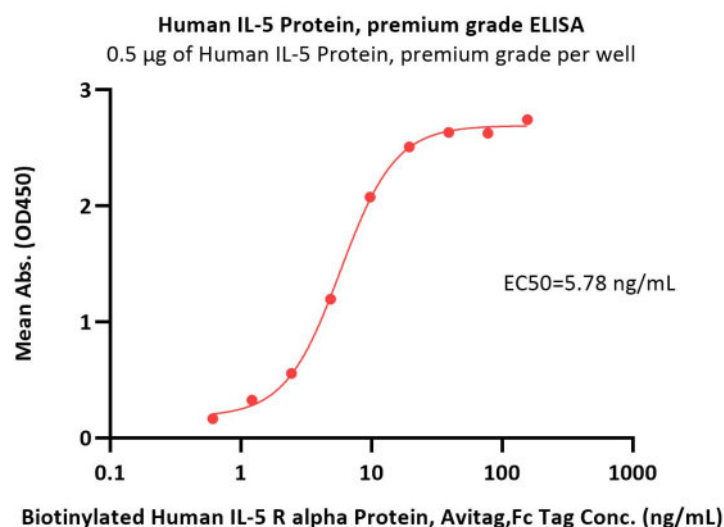
## Bioactivity-Bioactivity CELL BASE

Human IL-5 Protein, premium grade stimulates proliferation of 293F-STAT5/Luc-IL5RA-CD131-9 cells.



Human IL-5 Protein, premium grade (Cat. No. IL5-H5214) stimulates proliferation of 293F-STAT5/Luc-IL5RA-CD131-9 cells. The specific activity of Human IL-5 Protein, premium grade is  $> 3.00 \times 10^6$  IU/mg, which is calibrated against human IL-5 WHO International Standard (NIBSC code: 90/586) (QC tested).

## Bioactivity-ELISA



Immobilized Human IL-5 Protein, premium grade (Cat. No. IL5-H5214) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-5 R alpha Protein, Avitag,Fc Tag (Cat. No. ILA-H82F5) with a linear range of 0.6-10 ng/mL (QC tested).

## Background

Interleukin 5 (IL5) is an interleukin produced by type-2 T helper cells and mast cells. IL-5 is a 115-amino acid (in human, 133 in the mouse) -long TH2 cytokine that is part of the hematopoietic family. Unlike other members of this cytokine family (namely interleukin 3 and GM-CSF), this glycoprotein in its active form is a homodimer. Interleukin-5 has long been associated with the cause of several allergic diseases including allergic rhinitis and asthma, wherein a large increase in the

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6/20/2024

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number of circulating, airway tissue, and induced sputum eosinophils have been observed. Given the high concordance of eosinophils and, in particular, allergic asthma pathology, it has been widely speculated that eosinophils have an important role in the pathology of this disease. Drugs that target IL-5 are mepolizumab and reslizumab.

## Clinical and Translational Updates

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