



### Synonym

IL4,BCGF1,BSF1

### Source

Human IL-4, premium grade(IL4-H4218) is expressed from human 293 cells (HEK293). It contains AA His 25 - Ser 153 (Accession # [P05112-1](#)).

Predicted N-terminus: His 25

*It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage.*

*GMP-L04H26 is the GMP version of this IL4-H4218. These two proteins display indistinguishable performance profiles, thereby ensuring a seamless transition for end users from early preclinical stag to later clinical phases.*

### Molecular Characterization

**IL-4 (His 25 - Ser 153)**  
**P05112-1**

This protein carries no "tag".

The protein has a calculated MW of 15.0 kDa. The protein migrates as 19 kDa±3 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Endotoxin

Less than 0.01 EU per µg by the LAL method / rFC method.

### Host Cell Protein

<0.5 ng/µg of protein tested by ELISA.

### 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-HPLC.

### 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

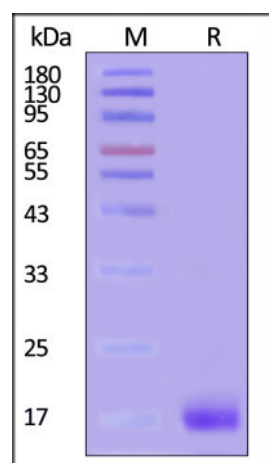
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

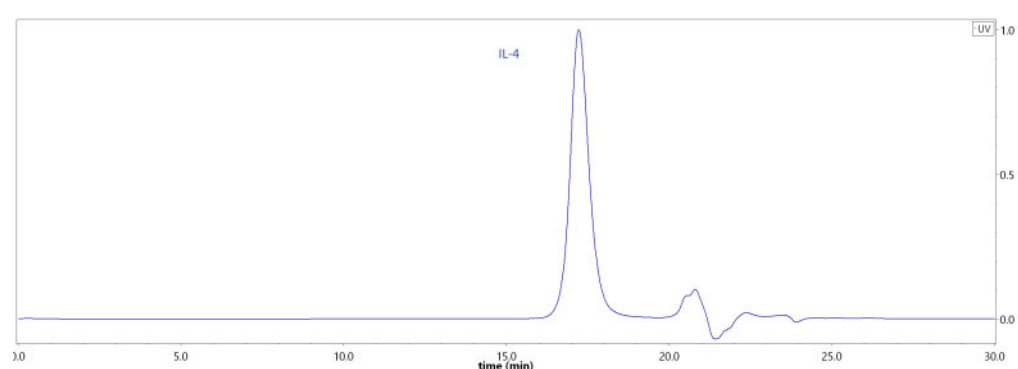
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

### SDS-PAGE



Human IL-4, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than

### SEC-HPLC



The purity of Human IL-4, premium grade (Cat. No. IL4-H4218) was greater than 95% as determined by SEC-HPLC.

Discounts, Gifts,  
and more!

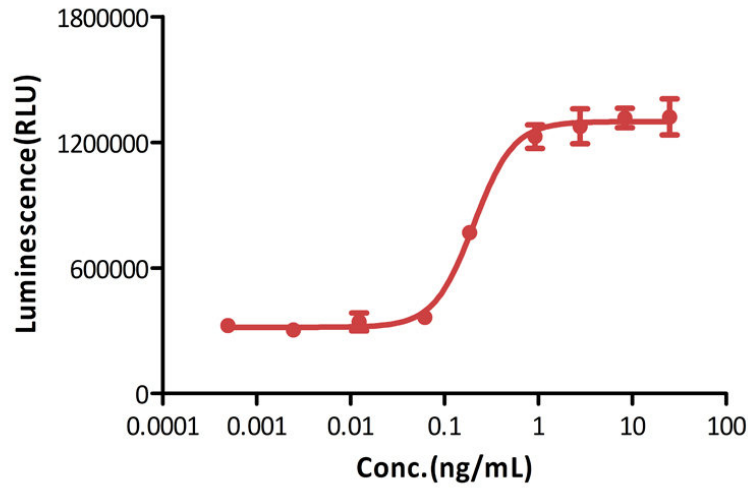




95% (With [Star Ribbon Pre-stained Protein Marker](#)).

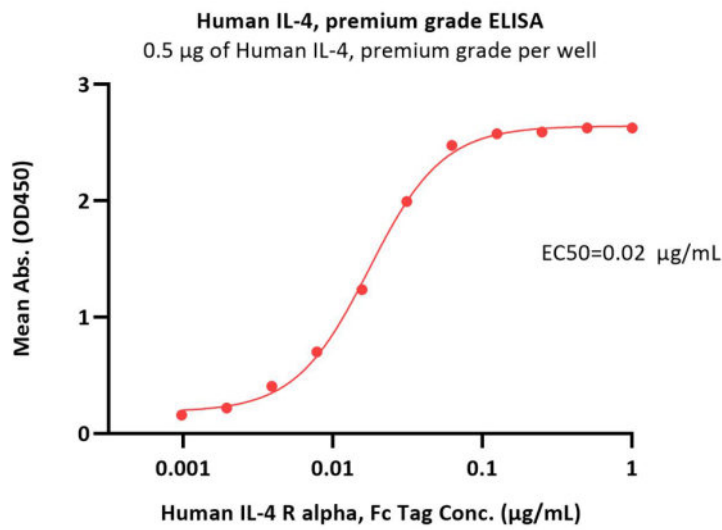
**Bioactivity-CELL BASE**

**Human IL-4, premium grade stimulates proliferation of TF-1 cells**

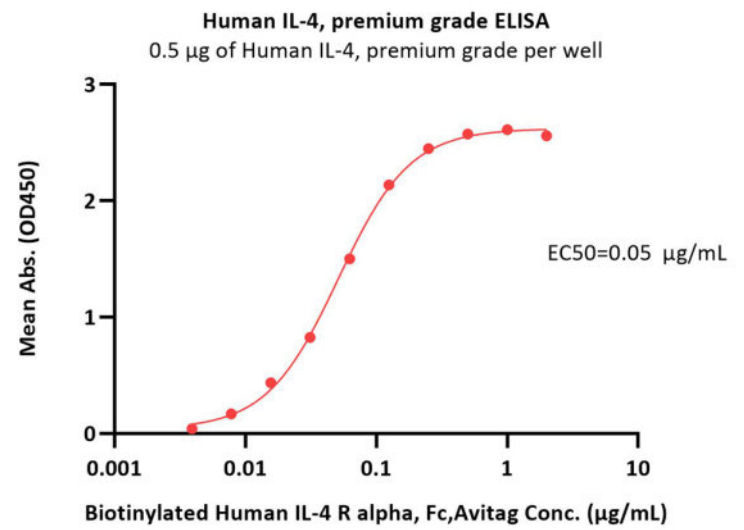


Human IL-4, premium grade (Cat. No. IL4-H4218) stimulates proliferation of TF-1 human erythroleukemic cell line. The specific activity of Human IL-4, premium grade is  $> 1.20 \times 10^7$  IU/mg, which is calibrated against human IL-4 WHO International Standard (NIBSC code: 88/656) (QC tested).

**Bioactivity-ELISA**



Immobilized Human IL-4, premium grade (Cat. No. IL4-H4218) at 5 µg/mL (100 µL/well) can bind Human IL-4 R alpha, Fc Tag (Cat. No. ILR-H5253) with a linear range of 0.001-0.031 µg/mL (QC tested).



Immobilized Human IL-4, premium grade (Cat. No. IL4-H4218) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-4 R alpha, Fc, Avitag (Cat. No. ILR-H82F4) with a linear range of 0.008-0.125 µg/mL (Routinely tested).

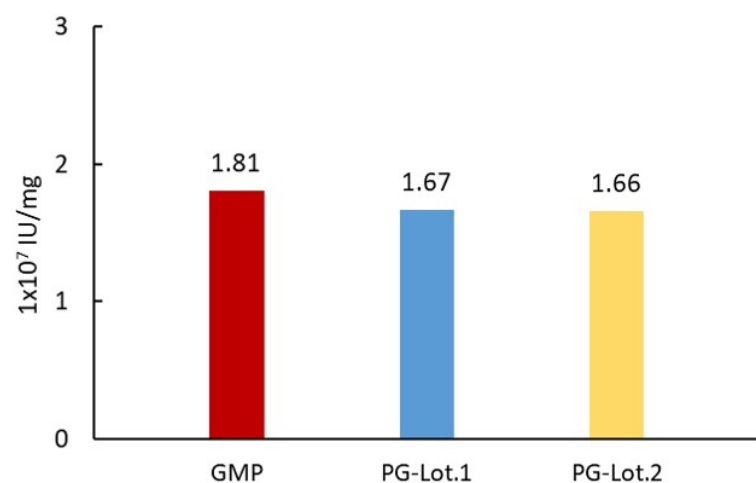
**Bioactivity-Stability**

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IL-4 stimulates proliferation of TF-1 cells



The Cell based assay shows batch-to-batch consistency between Acro's GMP and PG IL-4.

## Background

Interleukin-4, is a cytokine that induces differentiation of naive helper T cells (Th0 cells to Th2 cells). In the presence of IL-4 and IL-13, cytokines that are produced in a Th-2 type response, particularly during allergy and parasitic infections, macrophages become differentially activated, And this cytokine is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. Recently, researcher found that the cytokine IL-4 plays a key role in development of innate CD8<sup>+</sup> T cells in the thymus of several gene-deficient mouse strains, including Itk, KLF2, CBP and Id3, without previous exposure to antigen.

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and more!

