



## Synonym

CSIF,IL-10,IL10A,TGIF,B-TCGF,GVHDS,MGC126450,MGC126451,RP11-262N9.1,Interleukin-10

## Source

Human IL-10, premium grade(IL0-H5219) is expressed from human 293 cells (HEK293). It contains AA Ser 19 - Asn 178 (Accession # [P22301.1](#)).

Predicted N-terminus: Ser 19

*Human IL-10, premium grade (IL0-H5219), designed for preclinical stage, has the same activity and performance with GMP Human IL-10, 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-10(Ser 19 - Asn 178)  
P22301-1**

This protein carries no "tag".

The protein has a calculated MW of 18.6 kDa. The protein migrates as 17 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.

## 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.

>90% 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.

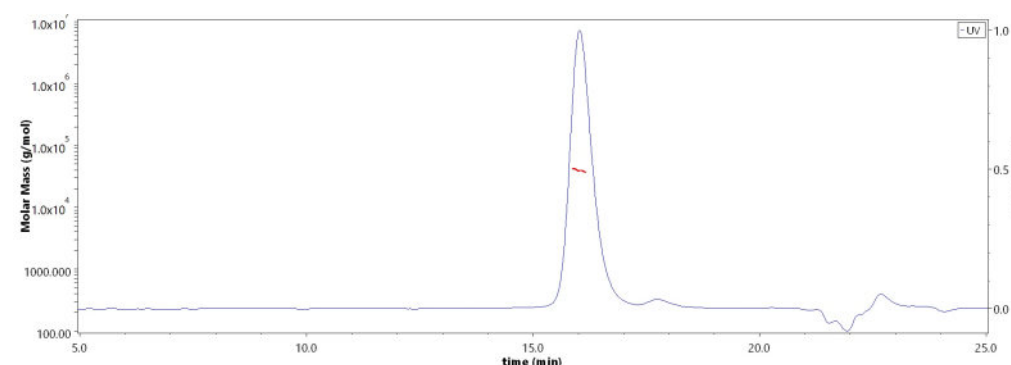
*Please avoid repeated freeze-thaw cycles.*

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.

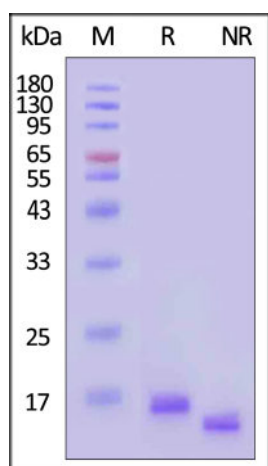
## SDS-PAGE

## SEC-MALS



Discounts, Gifts,  
and more!





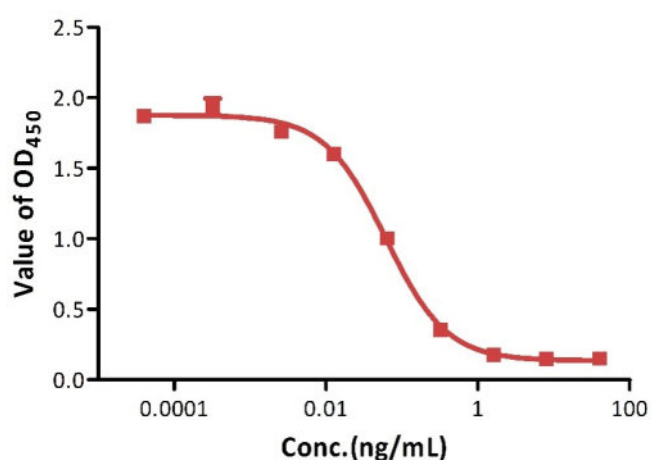
Human IL-10, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

The purity of Human IL-10, premium grade (Cat. No. IL0-H5219) is more than 90% and the molecular weight of this protein is around 35-45 kDa verified by SEC-MALS.

[Report](#)

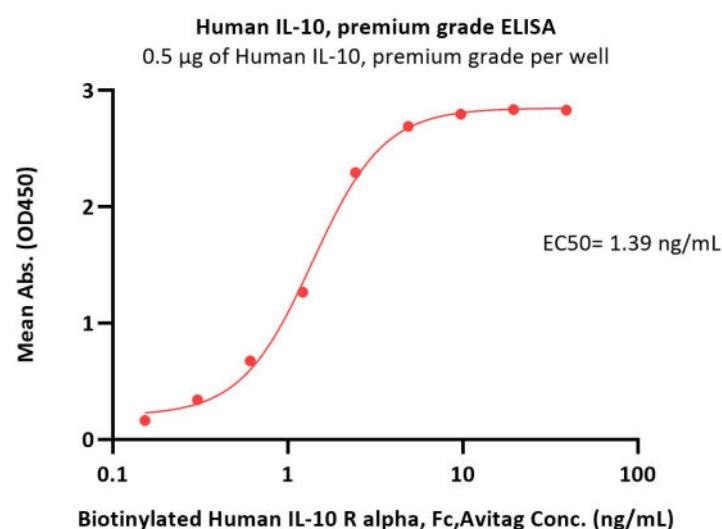
### Bioactivity-Bioactivity CELL BASE

Human IL-10, premium grade Inhibits the secretion of IL-6 by RAW264.7

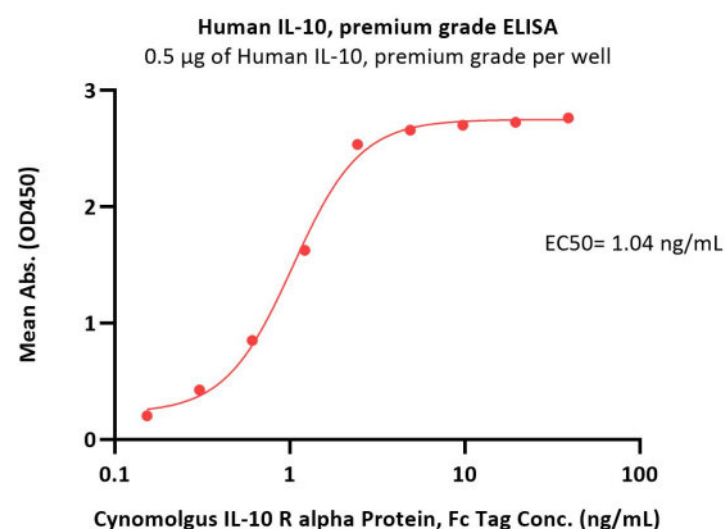


Human IL-10, premium grade (Cat. No. IL0-H5219) inhibits the secretion IL-6 by RAW264.7 cells. The specific activity of Human IL-10, premium grade is  $>1.00 \times 10^7$  IU/mg, which is calibrated against WHO Reference Reagent Interleukin-10 (Human, rDNA derived) (NIBSC code: 93/722) (QC tested).

### Bioactivity-ELISA



Immobilized Human IL-10, premium grade (Cat. No. IL0-H5219) at 5  $\mu$ g/mL (100  $\mu$ L/well) can bind Biotinylated Human IL-10 R alpha, Fc, Avitag (Cat. No. ILR-H82F6) with a linear range of 0.2-5 ng/mL (QC tested).



Immobilized Human IL-10, premium grade (Cat. No. IL0-H5219) at 5  $\mu$ g/mL (100  $\mu$ L/well) can bind Cynomolgus IL-10 R alpha Protein, Fc Tag (Cat. No. ILR-C5256) with a linear range of 0.2-5 ng/mL (Routinely tested).

Discounts, Gifts,  
and more!

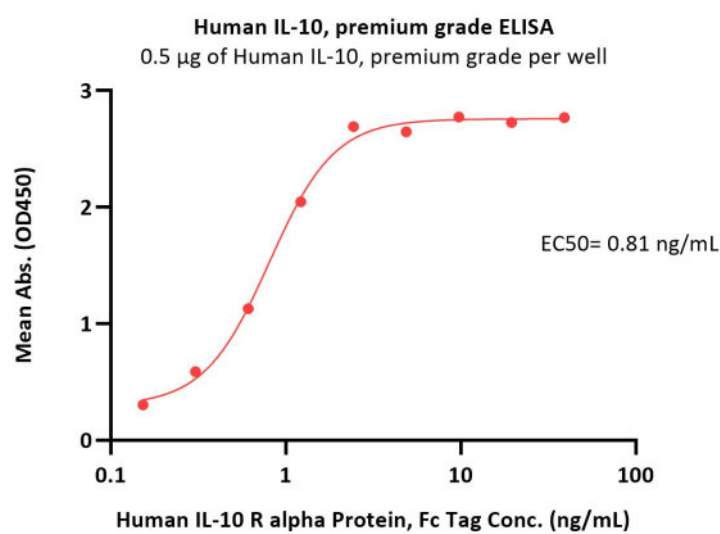


# Human IL-10 Protein, premium grade

Catalog # IL0-H5219



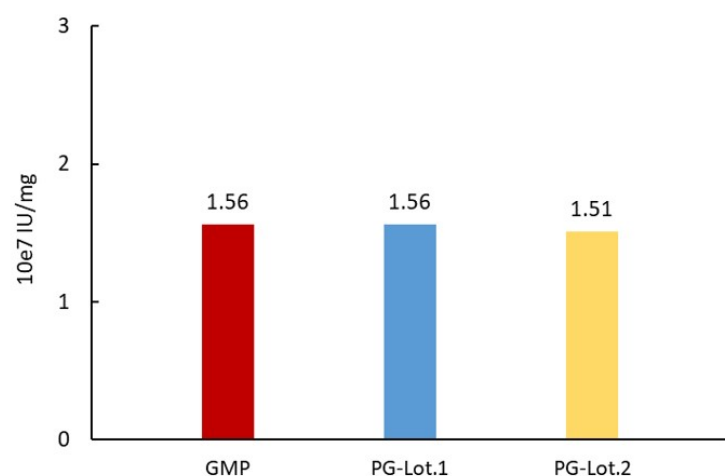
BIOSYSTEMS  
**Acro**



Immobilized Human IL-10, premium grade (Cat. No. IL0-H5219) at 5 µg/mL (100 µL/well) can bind Human IL-10 R alpha Protein, Fc Tag (Cat. No. ILR-H525a) with a linear range of 0.2-2 ng/mL (Routinely tested).

## Bioactivity-Stability

IL-10 Inhibits the secretion of IL-6 by RAW264.7



The Cell based assay shows batch-to-batch consistency between Acro's GMP and PG IL-10.

## Background

Interleukin-10 (IL-10) is also known as human cytokine synthesis inhibitory factor (CSIF), is an anti-inflammatory cytokine. IL-10 is an immunosuppressive cytokine produced by a variety of mammalian cell types including macrophages, monocytes, T cells, B cells and keratinocytes. Mature human IL-10 shares 72% - 86% amino acid sequence identity with bovine, canine, equine, feline, mouse, ovine, porcine, and rat IL-10. Whereas human IL-10 is active on mouse cells, mouse IL-10 does not act on human cells. IL-10 is capable of inhibiting synthesis of pro-inflammatory cytokines such as IFN- $\gamma$ , IL-2, IL-3, TNF $\alpha$  and GM-CSF made by cells such as macrophages and regulatory T-cells. It also displays a potent ability to suppress the antigen-presentation capacity of antigen presenting cells. However, it is also stimulatory towards certain T cells and mast cells and stimulates B cell maturation and antibody production. Knockout studies suggested the function of Interleukin-10 / IL-10 as an essential immunoregulator in the intestinal tract. Patients with Crohn's disease react favorably towards treatment with bacteria producing recombinant interleukin-10, showing the importance of interleukin-10 for counteracting excessive immunity in the human body.

## Clinical and Translational Updates

Discounts, Gifts,  
and more!



[www.acrobiosystems.com](http://www.acrobiosystems.com)

10/12/2024