

Human IL-10 Protein, His Tag

Catalog # IL0-H4248



Synonym

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

Source

Human IL-10, His Tag (IL0-H4248) is expressed from human 293 cells (HEK293). It contains AA Ser 19 - Asn 178 (Accession # [NP_000563.1](#)).
Predicted N-terminus: His

Molecular Characterization

Poly-his

IL-10(Ser 19 - Asn 178)
NP_000563.1

[Other Tags and Version](#) [Biotin & Other Labeled Version](#)

This protein carries a polyhistidine tag at the N-terminus.
The protein has a calculated MW of 19.5 kDa. The protein migrates as 20 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

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

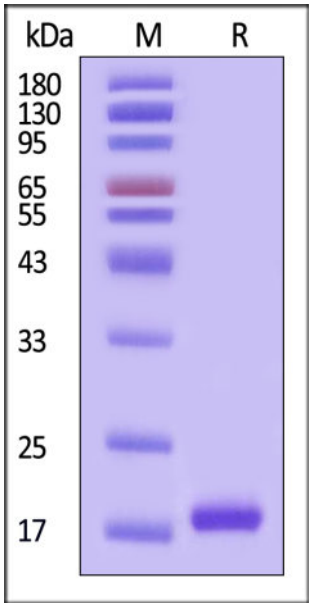
For long term storage, the product should be stored at lyophilized state at -20°C or lower.
Please avoid repeated freeze-thaw cycles.
This product is stable after storage at:

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

ACRO Quality Management System

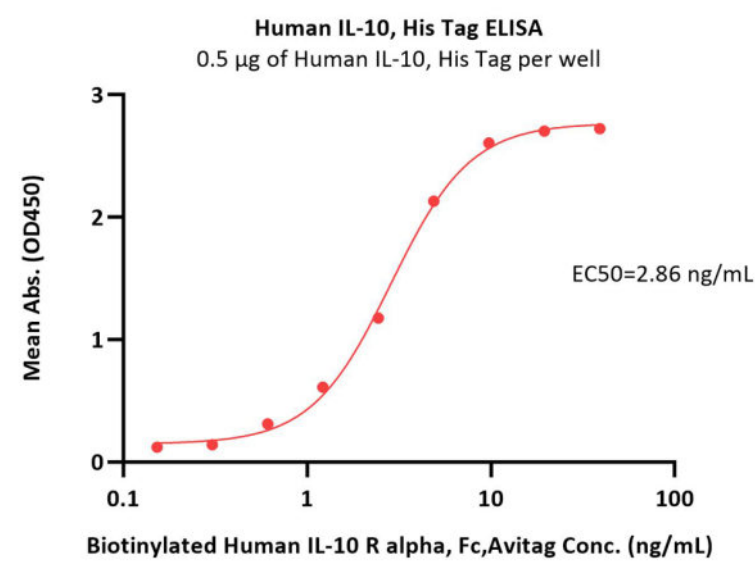
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



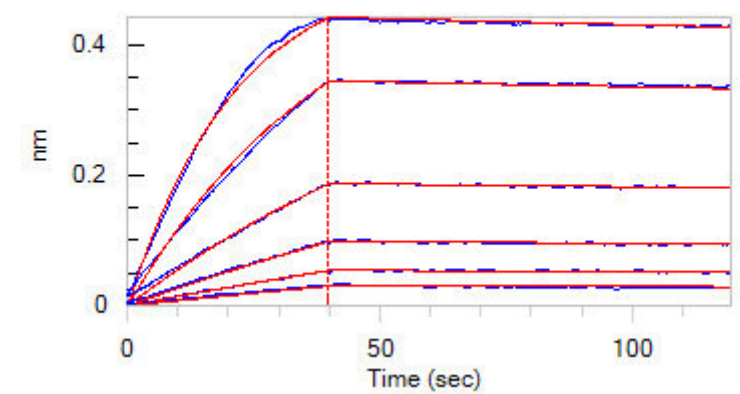
Human IL-10, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA

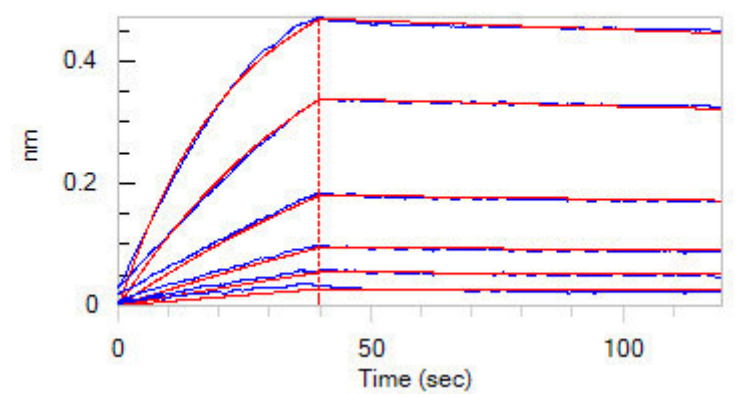


Immobilized Human IL-10, His Tag (Cat. No. IL0-H4248) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-10 R alpha, Fc,Avitag (Cat. No. ILR-H82F6) with a linear range of 0.2-10 ng/mL (QC tested).

Bioactivity-BLI

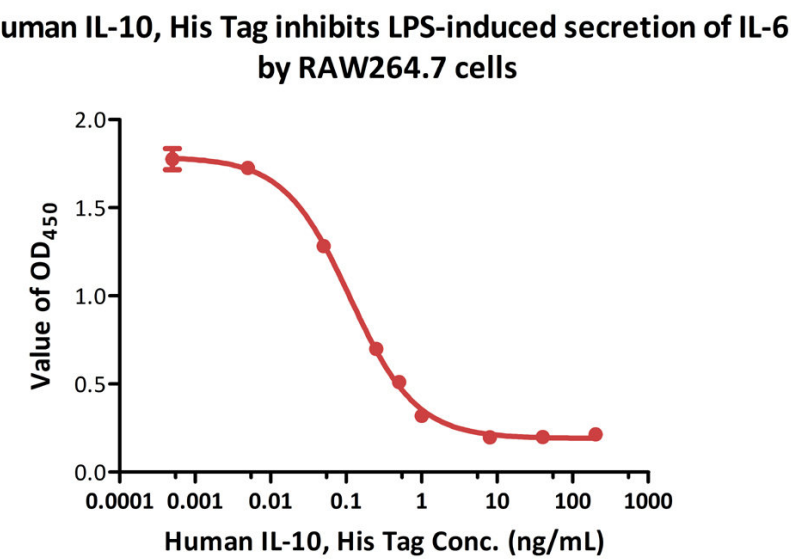


Loaded Cynomolgus IL-10 R alpha / CD210, Fc Tag (Cat. No. ILR-C5256) on Protein A Biosensor, can bind Human IL-10, His Tag (Cat. No. IL0-H4248) with an affinity constant of 0.96 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human IL-10 R alpha / CD210, Fc Tag (Cat. No. ILR-H525a) on Protein A Biosensor, can bind Human IL-10, His Tag (Cat. No. IL0-H4248) with an affinity constant of 1.5 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-CELL BASE



Human IL-10, His Tag (Cat. No. IL0-H4248) inhibits LPS-induced secretion of IL-6 by RAW264.7 cells. The EC50 for this effect is 0.11-0.24 ng/mL (Routinely tested).

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- γ , IL-2, IL-3, TNF α 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.

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