

## GFH83AF Recombinant Human IL-10 (Animal-Free)

### Description

Interleukin-10 (IL-10) is an anti-inflammatory cytokine produced by macrophages and type 2 T helper (Th2) cells. IL-10 inhibits the production of pro-inflammatory cytokines such as interferon- $\gamma$  (IFN- $\gamma$ ), Tumor Necrosis Factor  $\alpha$  (TNF- $\alpha$ ), interleukin-2 (IL-2), interleukin-3 (IL-3), interleukin-4 (IL-4), and Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF), made by macrophages and regulatory T cells. IL-10 also suppresses antigen presentation on antigen presenting cells, and enhances the survival, proliferation, and antibody production of B cells. Human IL-10 can act on mouse cells, while mouse IL-10 is not active on human cells.

This product is produced with no animal derived raw products. All processing and handling employs animal free equipment and animal free protocols.

<b>Length</b>	161 aa
<b>Molecular Weight</b>	18.8 kDa
<b>Source</b>	E. coli
<b>Accession Number</b>	P22301
<b>Purity</b>	$\geq 95\%$ determined by reducing and non-reducing SDS-PAGE

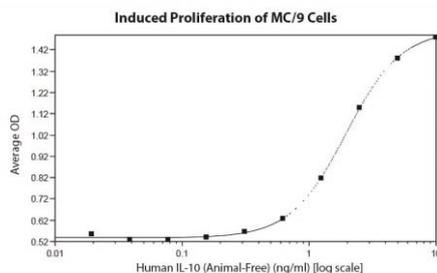
### Specifications

<b>Alternative Names</b>	Interleukin-10, interleukin 10, IL10, IL 10
<b>Biological Activity</b>	Human IL-10 (Animal-Free) is fully biologically active when compared to standard. The activity is determined by the ability to induce MC/9 cells proliferation and it is typically less than 5 ng/ml. This corresponds to an expected specific activity of $2 \times 10^5$ units/mg.
<b>Endotoxin Level</b>	$\leq 1.00$ EU/ $\mu$ g as measured by kinetic LAL
<b>Formulation</b>	Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing 0.1% Trifluoroacetic Acid (TFA)
<b>AA Sequence</b>	MSRGQYSRED NNCTHFPVGG SHMLLELRTA FSQVKTFQQT KDQLDNILLT DSLMQDFKGY LGCQALSEMI QFYLVEVMPQ AEKHGPEIKE HLNSLGEKLL TLRMLRRCH RFLPCENKSK AVEQVKSDFN KLQDQGVYKA MNEFDIFINC IEAYMMIKMK S

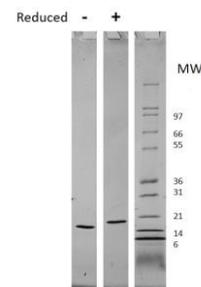
### Preparation and Storage

<b>Reconstitution</b>	Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile 10 mM HCl at 0.1 mg/ml, which can be further diluted into other aqueous solutions.
<b>Stability and Storage</b>	12 months from date of receipt when stored at $-20^{\circ}\text{C}$ to $-80^{\circ}\text{C}$ as supplied. 1 month when stored at $4^{\circ}\text{C}$ after reconstituting as directed. 3 months when stored at $-20^{\circ}\text{C}$ to $-80^{\circ}\text{C}$ after reconstituting as directed.

### Data



Induced proliferation of MC/9 cells for Human IL-10. Cell proliferation was measured to calculate the ED50, which is as expected less than 5 ng/ml.



Non-reducing (-) and reducing (+) conditions in a 4 - 20% Tris-Glycine gel stained with Coomassie Blue. 1  $\mu$ g of protein was loaded in each lane. Human IL-10 has a predicted Mw of 18.8 kDa.