

## Active GMP Recombinant Human IL10 protein

Cat. No. IL10-4325HG Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human IL10 was produced in E. coli using non-animal reagents in an animal-free facility under cGMP guidelines.

**Species** Human

**Source** E.coli

**Description**

Interleukin-10 (IL-10), also known as cytokine synthesis inhibitory factor (CSIF), is the charter member of the IL-10 family of  $\alpha$ -helical cytokines that also includes IL-19, IL-20, IL-22, IL-24, and IL-26/AK155. IL-10 is secreted by many activated hematopoietic cell types as well as hepatic stellate cells, keratinocytes, and placental cytotrophoblasts. Whereas human IL-10 is active on mouse cells, mouse IL-10 does not act on human cells. IL-10 is a 178 amino acid molecule that contains two intrachain disulfide bridges and is expressed as a 36 kDa noncovalently associated homodimer. The IL-10 dimer binds to two IL-10 R $\alpha$ /IL-10R1 chains, resulting in recruitment of two IL-10 R $\beta$ /IL-10R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3. IL-10R $\beta$  does not bind IL-10 by itself but is required for signal transduction. IL-10 is a critical molecule in the control of viral infections and allergic and autoimmune inflammation. It promotes phagocytic uptake and Th2 responses but suppresses antigen presentation and Th1 proinflammatory responses.

**Form** Lyophilized from a 0.2  $\mu$ m filtered concentrated solution in PBS, pH 7.4.

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<b>Bio-activity</b>	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using murine MC/9-2 cells is less than 1 ng/ml, corresponding to a specific activity of $> 1.0 \times 10^6$ IU/mg.
<b>Molecular Mass</b>	Approximately 18.6 kDa, a single non-glycosylated polypeptide chain containing 160 amino acids.
<b>AA Sequence</b>	SPGQGTQSENSCTHFPGNLPNMLRDLRDAFSRVKTFQMKDQLDNLKESLLEDF KGYLGQCALSEMIQFYLEEVMQAENQDPDIKAHVNSLGENLKTLLRRLRRCHRFLP CENKSKAVEQVKNAFNKLQEKGIIYKAMSEFDIFINYIEAYMTMKIRN
<b>Endotoxin</b>	Less than 1 EU/g of rHuIL-10 as determined by LAL method.
<b>Purity</b>	$> 95$ % by SDS-PAGE and HPLC analyses.
<b>Storage</b>	This lyophilized preparation is stable at 2-8 centigrade, but should be kept at -20 centigrade for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 centigrade. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 centigrade to -70 centigrade. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $\leq -20$ centigrade. Further dilutions should be made in appropriate buffered solutions.
<b>Quality Statement</b>	Our GMP proteins are produced according to relevant sections of the following documents: WHO TRS, No. 822, 1992 Annex 1, Good Manufacturing Practices for Biological Products; USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue-Engineered Products and USP Chapter 92, Growth Factors and Cytokines

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Used in Cell Therapy Manufacturing.

**Shipping**

The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

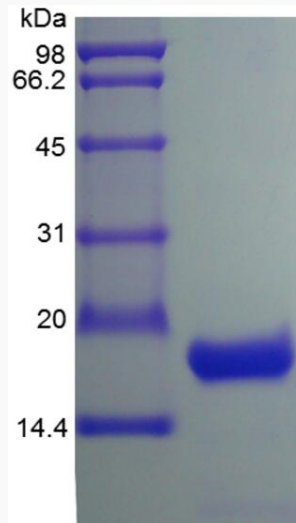
**GENE INFORMATION**

<b>Gene Name</b>	IL10 interleukin 10 [ Homo sapiens ]
<b>Official Symbol</b>	IL10
<b>Synonyms</b>	IL10; interleukin 10; interleukin-10; CSIF; cytokine synthesis inhibitory factor; IL 10; IL10A; T cell growth inhibitory factor; TGIF; T-cell growth inhibitory factor; GVHDS; IL-10; MGC126450; MGC126451;
<b>Gene ID</b>	3586
<b>mRNA Refseq</b>	NM_000572
<b>Protein Refseq</b>	NP_000563
<b>MIM</b>	124092
<b>UniProt ID</b>	P22301

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