

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 α-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 Rα/IL-10R1 chains, resulting in recruitment of two IL-10 Rβ/IL-10R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3. IL-10Rβ 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 μ m filtered concentrated solution in PBS, pH 7.4.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Bio-activity	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.
Molecular Mass	Approximately 18.6 kDa, a single non-glycosylated polypeptide chain containing 160 amino acids.
AA Sequence	SPGQGTQSENSCTHFPGNLPNMLRDLRDAFSRVKTFQMKDQLDNLLKESLLEDF KGYLGQCQALSEMIQFYLEEVMQAENQDPDIKAHVNSLGENLKTLLRLRRLRRCHRFLP CENKSKAVEQVKNAFNKLQEKGIYKAMSEFDIFINYIEAYMTMKIRN
Endotoxin	Less than 1 EU/g of rHuIL-10 as determined by LAL method.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Storage	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.
Reconstitution	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 ≤ -20 centigrade. Further dilutions should be made in appropriate buffered solutions.
Quality Statement	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

Gene Name IL10 interleukin 10 [Homo sapiens]

Official Symbol IL10

Synonyms 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;

Gene ID 3586

mRNA Refseq NM_000572

Protein Refseq NP_000563

MIM 124092

UniProt ID P22301

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