



## Technical Data Sheet

### Recombinant Human Interleukin-10 (rHu IL-10)

#### Human Interleukin-10

interleukin 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.

Catalog Number:	RC212-21
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 18.6kDa, a single non-glycosylated polypeptide chain containing 161 amino acids.
Quantity:	2ug/10ug/1mg
Purity:	>95% by SDS-PAGE and HPLC analyses.
Biological Activity:	Determined by the dose-dependent co-stimulation (with murine IL-4) of MC/9 cells. The ED <sub>50</sub> was found to be $\leq 2$ ng/ml, corresponding to a specific activity of $\geq 5 \times 10^5$ units/mg.
Physical Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in PBS, pH 7.4.
AA Sequence:	MSPGQGTQSE NSCTHFPGNL PNMLRDLRDA FSRVKTFFQM KDQLDNLKESLLEDFKGY LGCOALSEMI QFYLEEVMPO AENQDPDIKA HVNSLGENLK TLRRLRRCH RFLPCENKSK AVEQVKNAFN KLQEKGIYKA MSEFDIFINY IEAYMTMKIR N
Endotoxin:	Less than 1EU/ $\mu$ g of rHuIL-10 as determined by LAL method.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. 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 $\leq -20^\circ\text{C}$ . Further dilutions should be made in appropriate buffered solutions.



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**Storage:**

This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

**Usage:**

This material is offered by Bio Basic Inc. for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.