

Recombinant Human Interleukin-10

#R00047

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.

- 1 month, 2 to 8 °C under sterile conditions after reconstitution.

- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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 R α /IL-10R1 chains, resulting in recruitment of two IL-10 R β /IL-10R2 chains and activation of a signaling cascade involving JAK1, TYK2, and STAT3. IL-10R β 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.

AA Sequence

SPGQGTQSENSCTHFPGNLPNMLRDLRDAFSRVKTF
FQMKDQLDNLKESLLEDFKGYLGQCQALSEMIQFYL
EEVMPQAENQDPDIKAHVNSLGENLKTLLRLRLRRCH
RFLPCENKSKAVEQVKNAFNKLQEKGIIYKAMSEFDIFI
NYIEAYMTMKIRN

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 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	CSIF
Accession	P22301
GeneID	3586
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 18.6 kDa, a single non-glycosylated polypeptide chain containing 160 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ 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.

Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1 EU/µg of rHuIL-10 as determined by LAL method.
