

Product Information

Interleukin-10 rat, recombinant expressed in *Escherichia coli*

Catalog Number **I9154**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonym: IL-10

Product Description

Recombinant Rat Interleukin-10 (IL-10) is produced from a DNA sequence encoding the mature rat IL-10 protein, amino acid residues Ser¹⁹-Asn¹⁷⁸.¹ Mature rat IL-10, a 160 amino acid protein, has a predicted molecular mass of ~19 kDa. Rat IL-10 is 85% and 74% homologous with mouse and human IL-10, respectively.

Interleukin-10, a non-glycosylated polypeptide, was initially named cytokine synthesis inhibitory factor (CSIF). Originally, it was identified as a product of murine T helper 2 (Th2) clones that inhibit cytokine production by Th1 clones, dependent upon stimulation with antigen in the presence of antigen presenting cells (APC).

IL-10, a pleiotropic cytokine, exerts either immunostimulatory or immunosuppressive effects on a number of cell types. The cellular sources of IL-10 are Thy2 cells, activated fetal thymocytes, macrophages, keratinocytes, and LY-1 (CD5⁺) and normal B cells. IL-10 stimulates the growth of stem cells, mast cells, and thymocytes.² It enhances cytotoxic T cell development,³ co-stimulates B cell differentiation, and immunoglobulin secretion.⁴ IL-10 also inhibits cytokine production by macrophages and suppresses macrophage class II MHC expression.⁵

Interleukin-10 is lyophilized from a 0.2 μm filtered solution of 20 mM Tris with 0.1 M NaCl containing 50 μg of bovine serum albumin per 1 μg of cytokine.

Interleukin-10 activity is measured in a cell proliferation assay using the murine mast cell line, MC/9.⁶

Purity: >95% (SDS-PAGE, visualized by silver stain)

Endotoxin level: <1.0 EU (endotoxin unit) per 1 μg of the cytokine (LAL [Limulus amoebocyte lysate] method)

Storage/Stability

Store the product at $-20\text{ }^{\circ}\text{C}$. The product may be stored at $2-8\text{ }^{\circ}\text{C}$ for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Do not store in a frost-free freezer.

References

1. Goodman, R., et al., *Biochem. Biophys. Res. Commun.*, **189**, 1 (1992).
2. Rennick, D., et al., *Progress in Growth Factor Research*, **4**, 207 (1992).
3. Chen, W., et al., *J. Immunol.*, **147**, 528 (1991).
4. Rousset, F., et al., *Proc. Natl. Acad. Sci. USA*, **89**, 1890 (1992).
5. de Waal-Malefyt, R., et al., *J. Exp. Med.*, **174**, 915 (1991).
6. Thompson-Snipes, L., et al., *J. Exp. Med.*, **173**, 507 (1991).

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