

Product Information

Interferon- γ , human recombinant, expressed in HEK 293 cells cell culture tested, endotoxin tested

Catalog Number **I17001**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: IFN-gamma, IFN- γ

Product Description

Recombinant human Interferon- γ (IFN- γ) is expressed in human 293 cells as a glycoprotein with a calculated molecular mass of 16 kDa. This protein is manufactured in human cells using an all-human production system, with full chemically defined ingredients and with no serum. The expression system of human cells allows human-like glycosylation and folding, and often supports better stability of the protein in culture. The bioactivity of IFN- γ expressed in human 293 cells is significantly higher compared to bacterially expressed IFN- γ .

IFN- γ is a dimerized soluble cytokine that is the only member of the type II class of interferons.¹ It is a pleotropic cytokine, that has been shown to be important to the function of virtually all immune cells and both innate and adaptive immune responses.² IFN- γ exerts a variety of biological effects including antiviral activity, inhibition of cell or tumor growth,^{3,4} and promotion of terminal differentiation of B cells into immunoglobulin-producing cells.^{5,6} In addition to antiviral activity, recombinant human IFN- γ is a potent modulator of immune responses and modifies cellular processes.⁷

This product is lyophilized from phosphate buffered saline (PBS), pH 7.4, with no carrier proteins. It is aseptically filled.

The biological activity of recombinant human IFN- γ is tested in culture in a viral resistance assay. The ED₅₀ is defined as the effective concentration of IFN- γ that allows 50% cell growth in an antiviral cell based bioassay.

ED₅₀: ≤ 0.250 ng/mL

Purity: $\geq 98\%$ (SDS-PAGE)

Endotoxin level: ≤ 1 EU/ μg IFN- γ (LAL)

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Briefly centrifuge the vial before opening. Reconstitution of the protein in sterile, double-distilled water to a final concentration of 100 $\mu\text{g}/\text{mL}$ is recommended.

Storage/Stability

Store the lyophilized product at $-20\text{ }^{\circ}\text{C}$. The product is stable for at least 2 years as supplied.

After reconstitution, it is recommended to store the protein in working aliquots at $-20\text{ }^{\circ}\text{C}$.

References

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3. Gresser, I. et al., Interferon and cell division. I. Inhibition of the multiplication of mouse leukemia L 1210 cells in vitro by interferon preparations. *Proc. Natl. Acad. Sci. U. S. A.*, **66**, 1052-8 (1970).
4. Knight, E., Jr., Antiviral and cell growth inhibitory activities reside in the same glycoprotein of human fibroblast interferon. *Nature*, **262**, 302-3 (1976).
5. Benech, P.D., Definition of interferon gamma-response elements in a novel human Fc gamma receptor gene (Fc gamma RIb) and characterization of the gene structure. *J. Exp. Med.*, **176**, 1115-23 (1992).
6. Opdenakker, G. et al., Interaction of interferon with other cytokines. *Experientia*, **45**, 513-20 (1989).
7. Fisher, P.B., and Grant, S., Effects of interferon on differentiation of normal and tumor cells. *Pharmacol. Ther.*, **27**, 143-66 (1985).

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