Interferon-γ, mouse recombinant, expressed in E. coli

Catalog Number I4777
Storage Temperature –20 °C

Synonym: IFN-γ

**Product Description**

Interferon-γ is a cytokine consisting of 134 amino acid residues. The *E. coli* expressed protein forms a disulfide-linked homodimer with a molecular mass of ∼15.6 kDa.\(^1,2\) The overall structure is a globular dimer with flattened elliptical shaped subunits. Six α-helices are held together by short non-helical sequences and there are no β-sheets.\(^3\) In naturally occurring IFN-γ, the N-terminal amino acids, Cys-Tyr-Cys, are removed during post translational modification.\(^3\)

IFN-γ is produced primarily by CD4+ and CD8+ T lymphocytes and NK cells, and shares minimal homology with IFN-β or IFN-α proteins.\(^1,3,4\) The mouse IFN-γ amino acid sequence is ∼40% homologous with human IFN-γ.\(^1,3\) In general, IFN-γ is highly specific showing no cross reactivity between species.\(^1,3\)

Historically, IFN-γ has been recognized for its antiviral, antiproliferative, immunoregulatory, and proinflammatory activities.\(^4\) It induces the production of other cytokines, upregulates the expression of Class I and II MHC antigens, Fc receptor, and leukocyte adhesion molecules.\(^5\) IFN-γ modulates macrophage effector functions, influences isotype switching, and potentiates the secretion of immunoglobulins by B cells.\(^4,5\) IFN-γ also augments TH1 cell expansion and may be required for differentiation.\(^4\)

The product is lyophilized from a 0.2 µm filtered, aseptically filled buffered solution.

Purity: ≥98% (SDS-PAGE and HPLC)

Recombinant IFN-γ has been tested in a proliferation assay using murine WEHI-279 cells.

Endotoxin level: <0.1 ng/µg [1 EU (endotoxin units) per 1 µg].

**Precautions and Disclaimer**

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

**Preparation Instructions**

Reconstitute the vial contents to a stock concentration of 1 mg/ml with 5–10 mM sodium phosphate, pH 8.0. Further dilutions should be made into RPMI with 10% FCS or 5% HSA and stored at 2–8 °C for up to 1 week. For extended storage, freeze in working aliquots at –20 °C.

**Storage/Stability**

Store the product at –20 °C. It remains active for a few weeks at room temperature.

The reconstituted solution should be stored in working aliquots at –20 °C. Repeated freezing and thawing are not recommended.

**References**


ADM,KAA,MAM 02/11-1