

**Recombinant Human Interferon gamma**

Catalog Number: SJC03

Strength: 20µg, 100µg

**Specifications and Use**

**Description:** Recombinant human IFN-γ produced in E. coli. is a non-covalent Dimer non-glycosylated, containing 140 amino acids, and having a molecular mass of approximately 16.5kD.

**Source:** E. coli.

**Molecular Mass:** Approximately 16.5kD.

**Purity:** ≥97%, as determined by SDS-PAGE and HPLC method.

**Endotoxin Level:** ≤1EU/ug, determined by the LAL method.

**Biological Activity:** Bioactivity is detected using WISH cell (a heteroploid human amnion cell line). The specific activity shall be not less than 2.0×10<sup>7</sup> IU/mg of protein.

**Formulation:** Lyophilized from a 0.2µm filtered solution in 20mM Phosphate buffer.

**Reconstitution:** It is recommended that sterile ddH<sub>2</sub>O containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of not less than 10ug/ml of the cytokine.

**Storage:** Lyophilized samples are stable for greater than six months from date of receipt at -20° to -70°C.

■ Upon reconstitution, this cytokine can be stored under sterile conditions at 2-8°C for one month or at -20° to -70°C **in a manual defrost freezer** for three months without detectable loss of activity.

■ **Avoid repeated freeze-thaw cycles.**

**Human Interferon gamma**

Interferon-gamma (IFN-γ, also known as Type II interferon or immune interferon) is a cytokine produced primarily by T-lymphocytes and natural killer cells. The protein shares no significant homology with IFN-β or the various IFN-α family proteins. Mature IFN-γ exists as noncovalently-linked homodimers. Human IFN-γ is highly species specific and is biologically active only in human and primate cells. IFN-γ was originally characterized based on its antiviral activities. The protein also exerts antiproliferative, immunoregulatory and proinflammatory activities and is thus important in host defense mechanisms. IFN-γ induces the production of cytokines, upregulates the expression of class I and II MHC antigens, Fc receptor and leukocyte adhesion molecules. It modulates macrophage effector functions, influences isotype switching and potentiates the secretion of immunoglobulins by B cells. IFN-γ also augments TH1 cell expansion and may be required for TH1 cell differentiation. IFN-γ exerts its biological activities by binding to specific cell surface receptors with high-affinity binding sites. The IFN-γ receptor is present on almost all cell types except mature erythrocytes and has been cloned and characterized. The IFN-γ receptor is structurally related to the recently cloned IL-10 receptor.

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