

**RECOMBINANT HUMAN IFN- $\gamma$**

**Catalog # 02627**

**100 mg per vial**

**PRODUCT DESCRIPTION:**

Interferon- $\gamma$  (IFN- $\gamma$ ), also known as Type II interferon or immune interferon, is a highly species-specific pleiotropic cytokine produced primarily by T and NK cells. Natural mature IFN- $\gamma$  exists as non-covalently-linked homodimers with different levels of glycosylation. IFN- $\gamma$  exerts antiviral, antiproliferative, immunoregulatory and proinflammatory activities. It induces the production of cytokines, upregulates the expression of class I and II MHC antigens, Fc receptor and leukocyte adhesion molecules. IFN- $\gamma$  also augments Th1 cell expansion and may be required for Th1 cell differentiation. IFN- $\gamma$  binds to a heterodimer cell surface receptor that when stimulated activates the JAK-STAT pathway. Recombinant human IFN- $\gamma$  is a 17 kDa protein containing 144 amino acid residues.

**SOURCE:**

A DNA sequence encoding the mature human IFN- $\gamma$  protein was expressed in *E. coli*.

**PURITY:**

Greater than 97% as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is less than 0.1 ng per  $\mu$ g of the cytokine, as determined by the LAL method.

**FORMULATION:**

Lyophilized from a 0.2  $\mu$ m filtered solution in PBS containing 50  $\mu$ g of bovine serum albumin per 1  $\mu$ g of cytokine.

**RECONSTITUTION:**

It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of no less than 10  $\mu$ g/ml of the cytokine.

**STABILITY/STORAGE:**

The lyophilized sample is stable for greater than six months at -20°C to -70°C. Reconstituted IFN- $\gamma$  can be stored under sterile conditions at 2°C to 4°C for one month or at -20°C to -70°C for three months without detectable loss of activity.

**Avoid repeated freezing and thawing.**

**ACTIVITY:**

Activity was determined by measuring the antiviral effect using HeLa cells infected with EMC virus and the ED<sub>50</sub> using this assay was typically 8-15 units/mL or 0.8-1.5 ng/mL, giving a specific activity of approximately 1 x 10<sup>7</sup> units/mg protein.

**THIS REAGENT IS FOR RESEARCH USE ONLY.  
IT IS NOT TO BE ADMINISTERED TO HUMANS.**