



SHANGHAI GENOMICS

Recombinant Human Interferon γ

rHuIFN- γ

Catalog number: SG3110-14

Specifications and Use

- Source** ● *Escherichia coli*.
- Molecular Mass** ● Approximately 16.5kDa.
- Purity** ● $\geq 97\%$, as determined by SDS-PAGE and HPLC method.
- Biological Activity** ● Bioactivity is detected using WISH cell (a heteroploid human amnion cell line) as dependent cell strain. The specific activity shall be not less than 2×10^7 IU/mg of protein.
- Endotoxin Level** ● $\leq 1\text{EU}/\mu\text{g}$, determined by the LAL method.
- Formulation** ● Lyophilized from a $0.2\mu\text{m}$ filtered solution in 20mM Phosphate buffer.
- Solubility** ● It is recommended to reconstitute the lyophilized rHuIFN- γ in sterile ddH₂O containing at least 0.1% human serum albumin or bovine serum albumin to prepare a stock solution of no less than 10 $\mu\text{g}/\text{mL}$ of the cytokine.
- Stability** ● Lyophilized samples are stable for greater than six months from date of receipt at -20°C to -70°C .
● Upon reconstitution, this cytokine can be stored under sterile conditions at $2-8^\circ\text{C}$ for one month or at -20°C to -70°C in a manual defrost freezer for three months without detectable loss of activity.
● Avoid repeated freeze-thaw cycles.
- Usage** ● FOR RESEARCH USE ONLY. NOT FOR HUMAN USE.

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- α or the various IFN- γ 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 anti-proliferative, 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.