

Active Recombinant Human IFNG

Cat. No. IFNG-1367H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	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 16.5kDa.
Species	Human
Source	E.coli
ProteinLength	140 a.a.
Description	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

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	mature erythrocytes and has been cloned and characterized. The IFN- γ receptor is structurally related to the recently cloned IL-10 receptor.
Form	Lyophilized from a 0.2 μ m filtered solution in 20mM Phosphate buffer
Bio-activity	Bioactivity is detected using WISH cell (a heteroploid human amnion cell line). The specific activity shall be not less than 2.0 $\times 10^7$ IU/mg of protein.
Endotoxin	≤ 1 EU/ μ g, determined by the LAL method.
Purity	$\geq 97\%$, as determined by SDS-PAGE and HPLC method.
Usage	FOR RESEARCH ONLY
Storage	Lyophilized samples are stable for greater than six months from date of receipt at -20 centigrade to -70 centigrade. The reconstituted samples can be stored under sterile conditions at 2-8 centigrade for one month or at -20 centigrade to -70 centigrade for three months without detectable loss of activity. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile ddH ₂ 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 10 μ g/ml of the cytokine.

GENE INFORMATION

Gene Name	IFNG interferon, gamma [Homo sapiens]
Official Symbol	IFNG
Synonyms	IFG; IFI

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Gene ID	3458
mRNA Refseq	NM_000619
Protein Refseq	NP_000610
MIM	147570
UniProt ID	P01579
Chromosome Location	12q14
Pathway	ATF-2 transcription factor network, organism-specific biosystem; Allograft Rejection, organism-specific biosystem; Chagas disease (American trypanosomiasis), organism-specific biosystem
Function	cytokine activity; interferon-gamma receptor binding

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