

Recombinant Rat Interferon-γ

Rat, Recombinant (Ifng)

Expressed in *E. coli*

Cat. No. CRP0898

Lot. No. (See product label)

PRODUCT INFORMATION

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.

Amino-Acid Sequence: 135 aa , non-glycosylated

M. W. : 15,600 Da

Recombinant: Expressed in *E. coli*

Purity: >95% as determined by SDS-PAGE and HPLC.

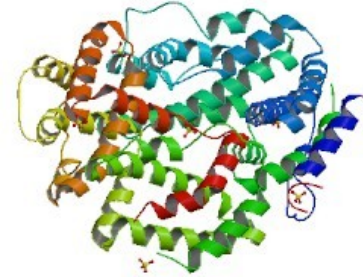
Formulation: Lyophilized from a 0.2μm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.

Specific Activity: Fully biologically active when compared to standard. The specific activity as determined in a viral resistance assay is less than 0.1 ng/ml, corresponding to a specific activity of 1.0×10^7 IU/ mg.

Endotoxin: Less than 1EU/mg of rIFN-γ as determined by LAL method.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤20°C. Further dilutions should be made in appropriate buffered solutions.

Storage: This lyophilized preparation is stable for several weeks at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working



Interferon gamma, Available structures:
[1eku](#), [1fg9](#), [1fyh](#), [1hig](#)

GENE INFORMATION

Gene Name: [Ifng](#)

Synonyms: IFNG2; Ifg; IFN-g; IFN-gamma; Immune Interferon; type II interferon; T cell interferon; MAF; IFNG; IFG; IFI; gamma interferon; Ifng; interferon gamma

mRNA Refseq: [NM_138880](#)

Protein Refseq: [NP_620235](#)

MIM: [147570](#)

GenelD: [25712](#)

UniProt ID: P01581

Chromosome Location: 7q22

Pathway: Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; Natural killer cell mediated cytotoxicity; Regulation of autophagy; T cell receptor signaling pathway; TGF-beta signaling pathway; Type I diabetes mellitus

Function: cytokine activity; interferon-gamma receptor binding

REFERENCES

1. Gray PW, Goeddel DV (August 1982). "Structure of the human immune interferon gene". *Nature* 298 (5877): 859–63.
2. Ealick SE, Cook WJ, Vijay-Kumar S, et al (May 1991). "Three-dimensional structure of recombinant human interferon-gamma". *Science (journal)* 252 (5006): 698–702.
3. Thiel DJ, le Du MH, Walter RL, et al (September 2000). "Observation of an unexpected third receptor molecule in the crystal structure of human interferon-gamma receptor com-

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