

# Interferon-gamma

Human, Recombinant (rHuIFN $\gamma$ )

Expressed in *E. coli*

Cat. No. CRP0811

Lot. No. (See product label)

## PRODUCT INFORMATION

**Description:** The major interferon produced by mitogenically or antigenically stimulated lymphocytes. It is structurally different from type I interferon and its major activity is immunoregulation. It has been implicated in the expression of class II histocompatibility antigens in cells that do not normally produce them, leading to autoimmune disease. Interferon gamma is produced mainly by T-cells and natural killer cells activated by antigens, mitogens, or alloantigens. It is produced by lymphocytes expressing the surface antigens CD4 and CD8. The synthesis of IFN-gamma is induced, among other things, by Interleukin-2, FGF-basic, and EGF.

**Amino-Acid Sequence:** 144 aa (The sequence of the first fifteen N-terminal amino acids was determined and was found to be Gln-Asn-Pro-Tyr-Val-Lys-Glu-Ala-Glu-Asn-Leu-Lys-Lys- Tyr-Phe.), non-glycosylated

**M. W. :** 16,879 Da

**Recombinant:** Expressed in *E. coli*

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

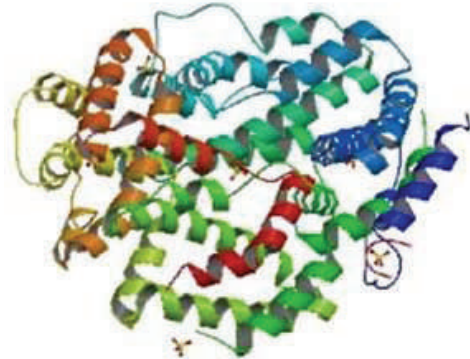
**Formulation:** The protein was lyophilized after extensive dialysis from a concentrated (1mg/ml) solution in 10mM sodium Phosphate buffer pH=7.4+/-0.1.

**Specific Activity:** The specific activity as determined in a viral resistance assay using VSV-WISH cells was found to be greater than  $1.5 \times 10^7$  IU/ mg.

**Endotoxin:** Less than 1ng/ $\mu$ g (1IEU/ $\mu$ g) determined by LAL test.

**Reconstitution:** It is recommended to reconstitute the lyophilized rHuIFN-gamma in sterile 18M $\Omega$ -cm H<sub>2</sub>O not less than 100 $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

**Storage:** Lyophilized rHuIFN-gamma although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuIFN-gamma should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Aliquot to avoid repeated freeze-thaw cycles.



Available structures: [1eku](#), [1fq9](#), [1fyh](#), [1hig](#)

## GENE INFORMATION

**Gene Name:** [IFNG](#)

**Gene Alias:** IFG; IFI

**Gene Type:** protein coding

**mRNA Refseq:** [NM\\_000619](#)

**Protein Refseq:** [NP\\_000610](#)

**MIM:** [147570](#)

**GeneID:** [3458](#)

**Chromosome Location:** 12q14

**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

## REFERENCES

- 1.Gray, P. W. and Goeddel, D. V. Structure of the human immune interferon gene.Nature.1982; 298: 859–863
- 2.Ealick, S. E., Cook, W. J. et al. Three-dimensional structure of recombinant human interferon-gamma.Science.1991; 252: 698–702
- 3.Thiel, D. J. et al. Observation of an unexpected third receptor molecule in the crystal structure of human interferon- $\gamma$  receptor complex. Structure. 2000; 8 (9): 927–936

**FOR RESEARCH USE ONLY**

2005-2008 Creative Biolabs. All rights reserved.

21 Brookhaven BLVD ·Port Jefferson Station, NY 11776, USA  
Technical Support: T: 631-871-5806 ·F: 631-614-7828  
E-mail: [info@creative-biolabs.com](mailto:info@creative-biolabs.com)  
[www.creative-biolabs.com](http://www.creative-biolabs.com)