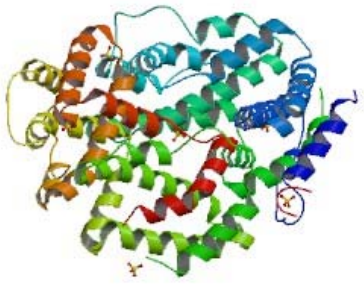
Interferon-γ

Mouse, Recombinant (rmIFN-γ)

Expressed in *E. coli*
Cat. No. CRP0897
Lot. No. (See product label)



Interferon gamma, Available structures:
1eku, 1fg9, 1fyh, 1hig

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: 134 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 rmIFN-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. Formaximal stability, apportion the reconstituted preparation into working Aliquots and store at –20°C to –70°C. Avoid repeated freeze/ thaw cycles.

FOR RESEARCH USE ONLY

GENE INFORMATION

Gene Name: Ifng
Synonyms: Ifg; IFN-g; IFN-gamma; Immune Interferon; type II interferon; T cell interferon; MAF; IFNG; IFG; IFI; gamma interferon
mRNA Refseq: NM_008337
Protein Refseq: NP_032363
MIM: 147570
GeneID: 15978
UniProt ID: Q6TDH0; P01580
Chromosome Location: Chr 10: 117.84—117.85 Mb
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 complex". Structure 8 (9): 927–36.

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