Active Recombinant Human Interferon, Gamma

Cat. No. IFNG-26H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Interferon encoding the full-length human Interferon-gamma (IFN-g) protein was expressed in modified*human 293 cells*.
Species	Human
Source	HEK293
Description	Interferon-gamma (IFN-gamma) is a type II interferon and is expressed predominantly by CD8+ and CD4+ T cells, and natural killer (NK) cells. IFN-gamma acts as a potent activator of antigen presenting cells as well as inducing expression of IL-12, which in turn promotes a TH1 cell mediated immune response for clearing of viral and microbial infections. IFN-gamma activates non-specific tumoricidal activity in macrophages in addition to enhancing the cytotoxicity of NK cells. IFN-gamma can also directly inhibit proliferation of transformed cells or potentiate the antiviral and anti-tumor effects of the type I interferons.
Amino Acid Sequence	CYCQDPYVKEAENLKKYFNAGHSDVADNGTLFLGILKNWKEESDRKIMQSQIVSFYF KLFKNFKDDQSIQKSVETIKEDMNVKFFNSNKKKRDDFEKLTNYSVTDLNVQRKAIH ELIQVMAELSPAAKTGKRKRSQMLFRGRRASQ.
Molecular Mass	IFN-gamma migrates as a band between 20 and 25 kDa on SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified IFN-gamma that has a predicted molecular mass of 17.1 kDa.
pI	IFN-gamma separates into a number of glycoforms with a pI between 6 and 10 on 2D

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% Carbohydrate	IFN-gamma consists of 10-30% carbohydrate by weight.
Glycosylation	IFN-gamma has N-linked and possibly O-linked oligosaccharides.
Purity	>95%, as determined by SDS-PAGE and visualized by Coomassie Brilliant Blue.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.
Activity	The ED50 of IFN-gamma is typically 0.01 - 0.02 ng/ml as measured in a cell prolipheration assay using the human growth factor-dependant M-07e cell line.

GENE INFORMATION

Gene Name	IFNG interferon, gamma [Homo sapiens]
Synonyms	IFNG; interferon, gamma; IFG; IFI; IFN-gamma; Immune interferon; interferon, gamma
Gene ID	3458
mRNA Refseq	NM_000619

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Protein Refseq	NP_000610
UniProt ID	P01579
Chromosome Location	12q14
MIM	147570
Pathway	Allograft rejection; Cytokine-cytokine receptor interaction; Graft-versus-host disease; Jak-STAT signaling pathway; Natural killer cell mediated cytotoxicity; Proteasome; Regulation of autophagy; Systemic lupus erythematosus; cell receptor signaling pathway; TGF-beta signaling pathway; Type I diabetes mellitus
Function	cytokine activity; interferon-gamma receptor binding

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