

Active Recombinant Human IFNG, His-tagged

Cat. No. IFNG-24H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human IFNG was produced in the endosperm tissue of barley grain (<i>Hordeum vulgare</i>).
Species	Human
Source	Barley Grain
Description	<p>IFN-gamma, a type II interferon and an acid-labile interferon, is mainly produced by CD4 and CD8 T-lymphocytes and natural killer cells activated by antigens, mitogens or alloantigens. IFN-gamma shows no significant homology with IFN-beta or IFN-alpha. IFN-gamma has antiviral and antiparasitic activities and exhibits also immunoregulatory and proinflammatory activities. IFN-gamma induces cytokine production and promotes antigen presentation by up regulating the expression of MHC proteins as well as other antigen proteins. In contrast to other interferons, which are mostly antiviral, the main activity of IFN-gamma seems to be immunomodulatory. Human IFN-gamma is species-specific and is only biologically active in human and primate cells.</p>
Form	Sterile filtered through a 0.2 µm filter. Lyophilized from PBS pH 7.2
Bio-activity	Recombinant human IFN-gamma was determined by its dose dependent cytostatic effect, in the presence of TNF-alpha, on HT-29 (human carcinoma) cells. The ED50 for this effect is typically below 0.2 ng/ml corresponding to specific activity of >5 x 10 ⁶ U/mg. Optimal concentration should be determined for specific applications and

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	cell lines.
Molecular Mass	Recombinant human IFN gamma contains 143 amino acids and a 16 a.a. Histidine-based tag for a total length of 159 a.a. and has a predicted molecular mass of 18.8 kDa. As of glycosilation, the recombinant protein migrates with an apparent molecular mass of 20-25 kDa in SDS-PAGE.
Endotoxin	Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg).
Purity	Greater than 95% by SDS-PAGE gel analysis.
Storage	The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Reconstitution	Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

GENE INFORMATION

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

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Protein Refseq	NP_000610
MIM	147570
UniProt ID	P01579
Chromosome Location	12q14
Pathway	ATF-2 transcription factor network, organism-specific biosystem; African trypanosomiasis, organism-specific biosystem; African trypanosomiasis, conserved biosystem; Allograft rejection, organism-specific biosystem; Allograft rejection, conserved biosystem; Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem;
Function	cytokine activity; interferon-gamma receptor binding;

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