

Recombinant Rat Ifng protein

Cat. No. Ifng-115R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Ifng protein was expressed in Escherichia coli.
Species	Rat
Source	E.coli
ProteinLength	134
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. It shares high sequence identity with mouse IFN-γ (86 %). 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. Additionally, IFN-γ augments TH1 cell expansion and may be required for TH1 cell differentiation.
Form	Lyophilized from a 0.2 μ m filtered concentrated solution in 1 $\times$ PBS, pH 7.4, 1 mM DTT, 5 % Trehalose and 0.05 % Tween-80.

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Bio-activity	Fully biologically active when compared to standard. The ED50 as determined by an anti-viral assay using murine L929 cells infected with encephalomyocarditis (EMC) virus is less than 0.1 ng/ml, corresponding to a specific activity of $> 1.0 \times 10^7$ IU/mg.
Molecular Mass	Approximately 15.5 kDa, a single non-glycosylated polypeptide chain containing 134 amino acids.
AA Sequence	QGTLIESLES LKNYFNSSSMDAMEGKSLLLDIWRNWQKDGNTKILESQIISFYLRRLFELVKDNQAISNNISVIESHLITNFFSNSKAKKDAFMSIAKFEVNNPQIQHKAVNELIRVIHQLSPESSLRKRKRSRC
Endotoxin	Less than 0.1 EU/g of rRtIFN- γ as determined by LAL method.
Purity	>97% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 10 mM HAc to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $\leq$ 20 centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name	<i>lfng</i>
Official Symbol	<i>lfng</i>

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Synonyms	IFNG; interferon gamma; IFN-gamma; IFNG2;
Gene ID	25712
mRNA Refseq	NM_138880
Protein Refseq	NP_620235
UniProt ID	P01581

SDS-PAGE of Ifng-115R

