

Recombinant Rat Interferon-gamma

#R00333

Size: 100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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.

AA Sequence

QGTLIESLES LKNYFNSSSMDAMEGKSLLLDIWRNW
QKDGNTKILESQIISFYLR LFEVLKDNQAISNNISVIES
HLITNFFSNSKAKKDAFMSIAKFEVNNPQIQHKAVNEL
IRVIHQLSPESSLRKRKRSRC

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 ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms

Accession P01581

GeneID 25712

Species Rat

Source Escherichia coli.

Molecular Weight Approximately 15.5 kDa, a single non-glycosylated polypeptide chain containing 134 amino acids.

Purity > 97 % by SDS-PAGE and HPLC analyses.

Biological 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.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	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.
Endotoxin	Less than 0.1 EU/ μ g of rRtIFN- γ as determined by LAL method.