

## Recombinant Human IFN-gamma

### Information

<b>Gene ID</b>	3458
<b>Accession #</b>	P01579
<b>Alternate Names</b>	
<b>Source</b>	<i>Escherichia coli</i> .
<b>M.Wt</b>	Approximately 16.9 kDa, a single non-glycosylated polypeptide chain containing 144 amino acids.
<b>AA Sequence</b>	MQDPYVKEAE NLKKYFNAGH SDVADNGTLF LGILKNWKEE SDRKIMQSQI VSFYFKLFKN FKDDQSIQKS VETIKEDMNV KFFNSNKKKR DDFEKLTNYS VTDLNVQRKA IHELIQVMAE LSPAAGTGKR KRSQMLFRGR RASQ
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	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.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	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.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as measured in anti-viral assays using human HeLa cells infected with encephalomyocarditis (EMC) virus is 0.15-0.80 ng/ml.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	100 µg	500 µg
Recombinant Human IFN-gamma	100 µg	500 µg

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- 12 months from date of receipt, -20 to -70 °C as supplied.
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## Quality Control

Purity	> 98 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuIFN-γ as determined by LAL method.

## 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.

## Reference

1. Pennino D, Bhavsar PK, Effner R, et al. 2012. J Allergy Clin Immunol,
2. Hibi M, Hachimura S, Ise W, et al. 2003. Cytotechnology, 43: 49-55.
3. Wang H, Ruan Z, Wang Y, et al. 2008. Mol Immunol, 45: 1548-56.
4. Kopinski P, Przybylski G, Jarzemska A, et al. 2007. Pol Merkur Lekarski, 23: 15-21.

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