

Recombinant Human Interferon-gamma GMP

Information

Gene ID	3458
Accession #	P01579
Alternate Names	Immune Interferon, type II interferon, T cell interferon, MAF
Source	Escherichia coli.
M.Wt	Approximately 16.9 kDa, a single non-glycosylated polypeptide chain containing 144 amino acids.
AA Sequence	MQDPYVKEAE NLKKYFNAGH SDVADNGTLF LGILKNWKEE SDRKIMQSQI VSFYFKLFKN FKDDQSIQKS VETIKEDMNV KFFNSNKKKR DDFEKLTNYS VTDLNVQRKA IHELIQVMAE LSPAAGTKGR KRSQMLFRGR RASQ
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - A minimum of 12 months when stored at $\leq -20^{\circ}\text{C}$ as supplied Refer to lot specific COA for the Use by Date - 1 month, 2 to 8°C under sterile conditions after reconstitution - 3 months, -20 to -70°C under sterile conditions after reconstitution
Formulation	Lyophilized from a $0.2\ \mu\text{m}$ filtered concentrated solution in PBS, pH 5.0, with 3 % Trehalose.
Reconstitution	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 $\leq -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED as measured in anti-viral assays using human HeLa cells infected with encephalomyocarditis (EMC) virus is 0.15-0.80 ng/ml.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5 μg	100 μg	
Recombinant Human Interferon-gamma GMP	5 μg	100 μg	

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- 3 months, -20 to -70°C under sterile conditions after reconstitution

Quality Control

Purity	> 98 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 0.01 EU/ μg of rHuIFN- γ GMP 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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