

IFN-gamma, murine recombinant

Information

Gene ID	15978
Accession #	P01580
Alternate Names	
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 15.5 kDa, a single non-glycosylated polypeptide chain containing 133 amino acids.
AA Sequence	HGTVIESLES LNNYFNSSGI DVEEKSLFLD IWRNWQKDGDK MKILQSQIIS FYLRLEFEVLK DNQAISNNIS VIESHLITTF FSNSKAKKDA FMSIAKFEVN NPQVQRQAFN ELIRVVHQLL PESSLRKRKR SRC
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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.
Formulation	Lyophilized from a 0.2 µm filtered solution in 20 mM Tris-HCl pH8.0, 300 mM NaCl, containing 5 % trehalose, 0.05 % Tween-20.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled 20 mM Tris-HCl pH8.0 with 50 mM NaCl to a concentration of 0.1-0.3 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by an anti-viral assay using murine L929 cells infected with encephalomyocarditis (EMC) virus is less than 0.8 ng/ml, corresponding to a specific activity of > 1.3 × 10 ⁶ IU/mg.
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	100 µg	500 µg
IFN-gamma, murine recombinant	100 µg	500 µg

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Quality Control

Purity	> 96 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rMuIFN-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. It shares high sequence identity with rat 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.

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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