

IFN-gamma Protein, Human

Cat. No.:	HY-P7025
Synonyms:	rHuIFN- γ ; IFNG; IFN-gamma; Interferon gamma
Species:	Human
Source:	E. coli
Accession:	P01579 (Q24-Q166)
Gene ID:	3458
Molecular Weight:	Approximately 16-18 kDa

PROPERTIES

AA Sequence	<p>Q D P Y V K E A E N L K K Y F N A G H S D V A D N G T L F L G I L K N W K E E S</p> <p>D R K I M Q S Q I V S F Y F K L F K N F K D D Q S I Q K S V E T I K E D M N V K</p> <p>F F N S N K K K R D D F E K L T N Y S V T D L N V Q R K A I H E L I Q V M A E L</p> <p>S P A A K T G K R K R S Q M L F R G R R A S Q</p>
Biological Activity	The ED ₅₀ is ≤ 0.4952 ng/mL as measured by HT-29 cells, corresponding to a specific activity of $\geq 2.019 \times 10^6$ units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 μ m filtered solution of PBS or PBS, pH 7.4, 5 % trehalose and 5 % mannitol or PBS, pH 7.4, 5% trehalose, 5% mannitol and 0.01% Tween80 or PBS, pH 7.4, 8% trehalose.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Human Interferon-gamma (hIFN γ) is naturally produced by CD4 ⁺ T helper cell type 1 (Th1) lymphocytes, CD8 ⁺ cytotoxic lymphocytes, natural killer (NK) cells, B cells, NKT cells, and professional antigen-presenting cells (APCs). Secretion of hIFN γ by NK cells and APCs is important in early host reactions against infection while production of hIFN γ by T lymphocytes is important in the adaptive immune response. hIFN γ shows antiviral and antitumor activity and is involved in complex interactions of cellular metabolism and differentiation ^[1] . Interferon-gamma (IFN- γ) is a cytokine with potent
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immunomodulatory property. IFN- γ activates cells via a different receptor than IFN- α and IFN- β , which accounts for the different physiological properties of the proteins^[2].

REFERENCES

[1]. Razaghi A, et al. Review of the recombinant human interferon gamma as an immunotherapeutic: Impacts of production platforms and glycosylation. J Biotechnol. 2016 Dec 20;240:48-60.

[2]. Fam CM, et al. PEGylation improves the pharmacokinetic properties and ability of interferon gamma to inhibit growth of a human tumor xenograft in athymic mice. J Interferon Cytokine Res. 2014 Oct;34(10):759-68.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA