

## IFN-gamma Protein, Human

Cat. No.:	HY-P7025
Synonyms:	rHuIFN- $\gamma$ ; IFNG; IFN-gamma; Interferon gamma
Species:	Human
Source:	E. coli
Accession:	P01579 (Q24-Q166)
Gene ID:	3458
Molecular Weight:	Approximately 17 kDa

### PROPERTIES

AA Sequence	<p>           M 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 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 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 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 <sub>50</sub> is <0.05 ng/mL as measured by HT $\times$ 29 cells, corresponding to a specific activity of >2 $\times$ 10 <sup>7</sup> units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O or PBS.
Storage & Stability	Stored at -20°C. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. 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	<p>Human Interferon-gamma (hIFN<math>\gamma</math>) is naturally produced by CD4<sup>+</sup> T helper cell type 1 (Th1) lymphocytes, CD8<sup>+</sup> cytotoxic lymphocytes, natural killer (NK) cells, B cells, NKT cells, and professional antigen-presenting cells (APCs). Secretion of hIFN<math>\gamma</math> by NK cells and APCs is important in early host reactions against infection while production of hIFN<math>\gamma</math> by T lymphocytes is important in the adaptive immune response. hIFN<math>\gamma</math> shows antiviral and antitumor activity and is involved in complex interactions of cellular metabolism and differentiation<sup>[1]</sup>. Interferon-gamma (IFN-<math>\gamma</math>) is a cytokine with potent immunomodulatory property. IFN-<math>\gamma</math> activates cells via a different receptor than IFN-<math>\alpha</math> and IFN-<math>\beta</math>, which accounts for the different physiological properties of the proteins<sup>[2]</sup>.</p>
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## 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.

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

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