

## IFN-alpha 7/IFNA7 Protein, Human (HEK293, Fc)

<b>Cat. No.:</b>	HY-P76404
<b>Synonyms:</b>	Interferon alpha-7; IFN-alpha-7; Interferon alpha-J; IeIF J; IFN-alpha-J1
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P01567 (C24-D189)
<b>Gene ID:</b>	3444
<b>Molecular Weight:</b>	Approximately 50 kDa.

### PROPERTIES

<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>IFN-alpha 7 (IFNA7; IFN-α7), belongs to the alpha/beta interferon (IFN) family, is produced by the macrophages with antiviral activities<sup>[1]</sup>. Interferon (IFN) is originally identified as a substance ‘interfering’ with viral replication in vitro. IFN-α/β and related molecules are classified as type I IFNs, as for the other two types of type II IFN (IFN-γ) and type III IFNs (IFN-λ), respectively<sup>[2]</sup>.</p> <p>Interferon stimulates the production of two enzymes: a protein kinase and an oligoadenylate synthetase. Interferon alpha (IFNα) shows significant biological activity in various cancers, particularly haematological malignancies such as hairy cell leukaemia and chronic myelogenous leukaemia<sup>[3]</sup>.</p> <p>IFNα-7 is identified as positive regulators that increases FOXP3 expression and/or decreases CTLA4 expression. Therefore, regulatory T cells (Tregs) as the key cells regulating peripheral autoreactive T lymphocytes, IFNα-7 regulates Treg functional states to protect Treg phenotype stabilization<sup>[4]</sup>.</p> <p>As for a widely use of IFN in animal model, the sequence of amino acids in IFNA7 protein of human is very different from mouse (58.73%)</p>
-------------------	---

### REFERENCES

- 
- [1]. Kumagai Y, et al. Alveolar macrophages are the primary interferon-alpha producer in pulmonary infection with RNA viruses. *Immunity*. 2007 Aug;27(2):240-52.
- [2]. Zhang SY, et al. Inborn errors of interferon (IFN)-mediated immunity in humans: insights into the respective roles of IFN-alpha/beta, IFN-gamma, and IFN-lambda in host defense. *Immunol Rev*. 2008 Dec;226:29-40.
- [3]. Raj NB, et al. Identification of a novel virus-responsive sequence in the promoter of murine interferon-alpha genes. *J Biol Chem*. 1991 Jun 15;266(17):11360-5.
- [4]. Ding M, et al. Secretome screening reveals immunomodulating functions of IFN $\alpha$ -7, PAP and GDF-7 on regulatory T-cells. *Sci Rep*. 2021 Aug 18;11(1):16767.
- 

**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](mailto:tech@MedChemExpress.com)

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