

## IFN-alpha 2b/IFNA2 Protein, Human (His)

Cat. No.:	HY-P701095
Synonyms:	rHuIFN- $\alpha$ 2b; IFNA; IFNA2; IFN-a 2b
Species:	Human
Source:	E. coli
Accession:	P01563 (C24-E188)
Gene ID:	3440
Molecular Weight:	16-21 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>           CDLPQTHSLG    SRRTLMLLLAQ    MRKISLFSCL    KDRHDFGFPQ            EEEFGNQFQKA    ETIPVLHEMI    QQIFNLFSTK    DSSAAWDETL            LDKFYTELYQ    QLNDLEACVI    QGVGVTEPL    MKEDSILAVR            KYFQRITLYL    KEKKYSPCAW    EVVRAEIMRS    FSLSTNLQES            LRSKE         </p>
<b>Biological Activity</b>	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED <sub>50</sub> this effect is 0.1225 ng/mL, corresponding to a specific activity is 8.16×10 <sup>6</sup> units/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.22 $\mu$ m filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/ $\mu$ g, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<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 2 (IFNA2; IFN-<math>\alpha</math>2), belongs to the type I interferon family, produced by the plasmacytoid dendritic cells (pDCs) exposure to HIV-1BaL in order to inhibit viral infection<sup>[1]</sup>.</p> <p>Interferon (IFN) is originally identified as a substance 'interfering' with viral replication in vitro. IFN-<math>\alpha</math>/<math>\beta</math> and related molecules are classified as type I IFNs, as for the other two types of type II IFN (IFN-<math>\gamma</math>) and type III IFNs (IFN-<math>\lambda</math>), respectively<sup>[2]</sup>.</p>
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IFN-alpha 2 subtype is the only one that is currently licensed to treat infections caused by hepatitis B virus (HBV) and HCV<sup>[3]</sup>. IFN-alpha 2 shows a Sortilin-dependent trafficking in cells and increases the expression level of interferon-stimulated genes (ISGs) in HIV-infected cells<sup>[1][4]</sup>. It also exhibits cytotoxic activity against CD8<sup>+</sup> T cells and enhances CD4<sup>+</sup> T cell depletion<sup>[3]</sup>. Among the IFN-alpha 2 alleles, IFN-alpha 2b is being the predominant allele while IFN $\alpha$ -2a is less predominant and IFN $\alpha$ -2c only a minor allelic variant<sup>[5]</sup>.

IFN-alpha 2 has a broad application in research of cancer, including some hematological malignancies and solid tumors<sup>[6]</sup>. As for a wild use of IFN in animal disease model, the sequence of amino acids in IFN $\alpha$ 2a protein of human is very different from mouse (59.57%).

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**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