

## IFN-alpha 2b/IFNA2 Protein, Human (K46R)

Cat. No.:	HY-P7023
Synonyms:	rHuIFN- $\alpha$ 2b; IFNA; INFA2; IFN-a 2b
Species:	Human
Source:	E. coli
Accession:	P01563 (C24-E188, K46R)
Gene ID:	3440
Molecular Weight:	Approximately 17.0 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>           C D L P Q T H S L G    S R R T L M L L A Q    M R R I S L F S C L    K D R H D F G F P Q            E E F G N Q F Q K A    E T I P V L H E M I    Q Q I F N L F S T K    D S S A A W D E T L            L D K F Y T E L Y Q    Q L N D L E A C V I    Q G V G V T E T P L    M K E D S I L A V R            K Y F Q R I T L Y L    K E K K Y S P C A W    E V V R A E I M R S    F S L S T N L Q E S            L R S K E         </p>
<b>Biological Activity</b>	The ED <sub>50</sub> is <0.05 ng/mL as measured by TF-1 cells, corresponding to a specific activity of >2.0 × 10 <sup>7</sup> units/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized after extensive dialysis against PBS.
<b>Endotoxin Level</b>	<0.2 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. 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.
<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>. 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</p>
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(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>.

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## REFERENCES

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

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