

IFN-alpha 2a/IFNA2 Protein, Human (R46K)

Cat. No.:	HY-P7022
Synonyms:	rHuIFN- α 2a; IFNA; IFNA2; IFN-a 2a
Species:	Human
Source:	E. coli
Accession:	P01563 (C24-E188, R46K)
Gene ID:	3440
Molecular Weight:	Approximately 16-20 kDa

PROPERTIES

AA Sequence	<p> CDLPQTHSLG SRRTLMLLAQ MRKISLFSCL KDRHDFGFPQ EEFGNQFQKA ETIPVLHEMI QQIFNLFSTK DSSAAWDETL LDKFYTELYQ QLNDLEACVI QGVGVTEPL MKEDSILAVR KYFQRITLYL KEKKYSPCAW EVVRAEIMRS FSLSTNLQES LRSKE </p>
Biological Activity	The ED ₅₀ is ≤ 0.5005 ng/mL as measured by TF-1 cells, corresponding to a specific activity of $\geq 1.998 \times 10^6$ units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 μ m filtered solution of PBS or 20 mM PB, 150 mM NaCl, pH 7.2 or 50 mM Tris-HCL, 300 mM NaCl, pH 8.0
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	<p>IFN-alpha 2 (IFNA2; IFN-α2), belongs to the type I interferon family, produced by the plasmacytoid dendritic cells (pDCs) exposure to HIV-1BaL in order to inhibit viral infection^[1].</p> <p>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^[2].</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^[3]. IFN-alpha 2 shows a Sortilin-dependent trafficking in cells and increases the expression level of interferon-stimulated genes (ISGs) in HIV-infected cells^{[1][4]}. It also exhibits cytotoxic activity against CD8⁺ T cells and enhances CD4⁺ T cell depletion^[3]. Among the IFN-alpha 2 alleles, IFN-alpha 2b is being the predominant allele while IFN α -2a is less predominant and IFN α -2c only a minor allelic variant^[5]. IFN-alpha 2 has a broad application in research of cancer, including some hematological malignancies and solid tumors^[6]. As for a widely use of IFN in animal disease model, the sequence of amino acids in IFN α 2a protein of human is very different from mouse (59.57%).

REFERENCES

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