

IFN-alpha 2/IFNA2 Protein, Human (P.pastoris)

Cat. No.:	HY-P73246
Synonyms:	Interferon alpha-2; IFN-alpha-2; LeIF A; IFNA2; IFNA2A
Species:	Human
Source:	P. pastoris
Accession:	P01563 (C24-E188)
Gene ID:	3440
Molecular Weight:	Approximately 19.3 kDa

PROPERTIES

AA Sequence	<p> CDLPQTHSLG SRRTLMLLAQ MRKISLFSCL KDRHDFGFPQ EEEFGNQFQKA ETIPVLHEMI QQIFNLFSTK DSSAAWDETL LDKFYTELYQ QLNDLEACVI QGVGVTEPL MKEDSILAVR KYFQRITLYL KEKKYSPCAW EVVRAEIMRS FSLSTNLQES LRSKE </p>
Biological Activity	Measured in antiviral assays using WISH human amnion cells infected with vesicular stomatitis virus(VSV) and the EC ₅₀ is typically 0.6-4.2 pg/mL.
Appearance	Solution
Formulation	Supplied as a 0.22 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

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]. IFN-alpha 2 subtype is the only one that is currently licensed to treat infections caused by hepatitis B virus (HBV) and HCV^[3].</p>
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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

[1]. Abraham S, et al. Gene therapy with plasmids encoding IFN- β or IFN- α 14 confers long-term resistance to HIV-1 in humanized mice. *Oncotarget*. 2016 Nov 29;7(48):78412-78420.

[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.

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

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