

IFN-alpha 4/IFNA4 Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P76983
Synonyms:	Interferon alpha-4; Interferon alpha-4B; Interferon alpha-76
Species:	Rat
Source:	HEK293
Accession:	D3ZFH0 (C24-K189)
Gene ID:	298205
Molecular Weight:	Approximately 48-53 kDa due to the glycosylation.

PROPERTIES

AA Sequence	<p> CDLPPTLNLR NKRAFTLLAQ MRRLSPV SCL KDRQDFGFPQ EKVDAQQIQK AQTIPVLHEL SQQVLNIFTS KDS SA AWNAT LLDSFCNDLH QQLSDLKVCL MQQVGMQEP P LTQEDSLLAV REYFHRITVY LTEKKHSPCA WEVVRAEVWR ALSSSVYLLA KLS E E K </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/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 4 (IFNA4; IFN-α4), belongs to the alpha/beta interferon (IFN) family, is produced by the macrophages with antiviral activities. 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^[1].</p> <p>Interferon alpha (IFNa) shows significant biological activity in various cancers, particularly haematological malignancies such as hairy cell leukaemia and chronic myelogenous leukaemia^[2].</p> <p>IFN-alpha 4 is the subtypes dominates in IFN-alpha, whose the response with IFNA5, IFNA7, and IFNA14 accounting for up to</p>
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85% of the subtypes expressed by Peripheral blood mononuclear cells (PBMCs)^[3].

IFN-alpha 4 is promoted by interferon (IFN) regulatory factors (IRFs), especially IRF-1 and IRF-7^{[5][6]}. And it exhibits function by inhibiting virus RNA replication and enhances human natural killer cytotoxicity against virus^{[4][7]}.

As for a wild use of IFN in animal model, the sequence of amino acids in IFNA4 protein of rat shows 80.98% similarity with mouse, but is very different from human (57.98%).

REFERENCES

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- [3]. Li Y, et al. Expression Pattern of Individual IFNA Subtypes in Chronic HIV Infection. *J Interferon Cytokine Res.* 2017 Dec;37(12):541-549.
- [4]. Verhagen A, et al. Comparison of augmentation of human natural killer cell cytotoxicity by interferon-alpha subtypes. *Nat Immun Cell Growth Regul.* 1990;9(5):325-33.
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Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

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