# IFN-alpha 2/IFNA2 Protein, Rhesus Macaque (P.pastoris)

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| **Cat. No.:** | HY-P75889 |
| **Synonyms:** | Interferon alpha-2; IFN-alpha-2; Interferon alpha-A; LeIF A; IFNA2A |
| **Species:** | Rhesus Macaque |
| **Source:** | P. pastoris |
| **Accession:** | B6CK11 (C24-E188) |
| **Gene ID:** | 709948 |
| **Molecular Weight:** | Approximately 19.5 kDa |

## PROPERTIES

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| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. |
| **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**

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].

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].

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 IFNα-2a is less predominant and IFNα-2c only a minor allelic variant[5].

IFN-alpha 2 has a bored application in research of cancer, including some hematological malignancies and solid tumors[6].

## REFERENCES

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[3]. Sutter K, et al. Interferon α subtypes in HIV infection. Cytokine Growth Factor Rev. 2018 Apr;40:13-18.

[4]. Watanabe H, et al. Detailed structure of mouse interferon α2 and its interaction with Sortilin. J Biochem. 2021 Oct 11;170(2):265-273.

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[6]. Paul F, et al. IFNA2: The prototypic human alpha interferon. Gene. 2015 Aug 10;567(2):132-7.



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