

# Recombinant Human IFN-alpha 21 Protein

Catalog No.: RP01900 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	3452	P01568

### Tags

C-His

### Synonyms

IFNA21; IFN-alpha 21; IFNalpha F; IFN-alpha F; IFN-alpha-21; IFN-alpha1; interferon alpha-21; Interferon alpha-F; interferon; alpha 21; LeIF F; leukocyte interferon protein; MGC126687; MGC126689

## Product Information

Source	Purification
HEK293 cells	≥ 90% as determined by SDS-PAGE.

Calculated MW	Observed MW
20.15 kDa	20-25 kDa

### Endotoxin

< 0.01 EU/μg of the protein by LAL method

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

Interferons (IFN) are a family of cytokines with potent antiviral, anti-proliferative and immunomodulatory properties, classified based on their binding specificity to cell surface receptors. Human IFNA2 was originally cloned in the early '80s and now more than a dozen closely related IFN alpha subtypes have been identified in both the human and mouse genome, each sharing about 80% amino acid (aa) sequence homology. Structurally, type I IFNs belong to the class of five helical bundle cytokines, with the IFNA subtypes containing 2 conserved disulfide bonds. There is not a mouse homolog for IFNA21, but mature human IFNA21 is identical to chimpanzee IFNA21. The type I IFNs bind to the interferon alpha receptor (IFNAR), which consists of two subunits: IFNAR1 (alpha -subunit) and IFNAR2 (beta -subunit). Individual IFNA subtypes are known to display unique efficacies to viral protection, with IFNA21 displaying intermediate activity inducing interferon stimulating genes. Further, human IFNA21 has shown weak anti-viral activity against viruses such as metapneumovirus.

## Basic Information

### Description

Recombinant Human IFN-alpha 21 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Cys24-Glu189) of Human IFN-alpha 21/IFNA21 (Accession #NP\_002166.2) fused with a His tag at the C-terminus.

### Bio-Activity

Measured in a cell cytotoxicity assay using TF-1 cells. The ED<sub>50</sub> for this effect is 0.50-1.98 ng/mL, corresponding to a specific activity of 5.05×10<sup>5</sup>~2.00×10<sup>6</sup> units/mg.

### Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

### Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

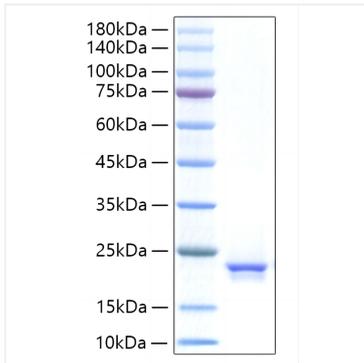
### Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

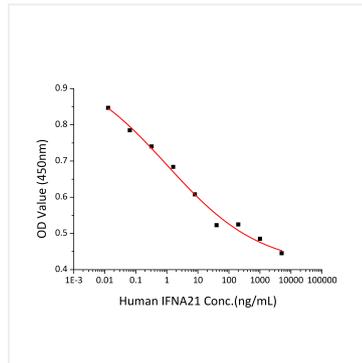


## Validation Data

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Recombinant Human IFN-alpha 21 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Human IFN-alpha 21/IFNA21 Protein cytotoxicity assay using TF-1 cells. The ED<sub>50</sub> for this effect is 0.50-1.98 ng/mL, corresponding to a specific activity of  $5.05 \times 10^5 \sim 2.00 \times 10^6$  units/mg.