

Recombinant Human IFN- α 21 Protein

Catalog No.: RP01900

Sequence Information

Species Gene ID

Human 3452

Swiss Prot Tags

P01568 C-His

Synonyms

IFNA21; IFN- α 21; IFN α 21 F; IFN- α 21 F; IFN- α 21; IFN- α 21; IFN- α 21; Interferon α -21; Interferon α -F; interferon, α 21; I α F; leukocyte interferon protein; MGC126687; MGC126689

Product Information

Source Purification

HEK293 cells $\geq 90\%$ as determined by SDS-PAGE.

Calculated MW Observed MW

20.15 kDa 20–25 kDa

Endotoxin

< 0.01 EU/ μ g of the protein by LAL method

Formulation

Lyophilized from a 0.22 μ m 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.

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 α 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 α receptor (IFNAR), which consists of two subunits: IFNAR1 (α -subunit) and IFNAR2 (β -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- α 21 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Cys24–Glu189) of Human IFN- α 21/IFNA21 (Accession #NP_002166.2) fused with a His tag at the C-terminus.

Activity

Measured in a cell cytotoxicity assay using TF-1 cells. The ED_{50} 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.

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

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

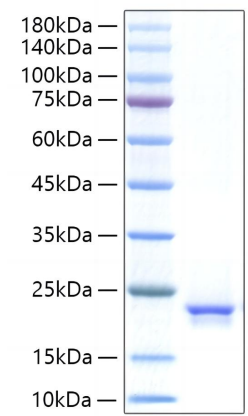
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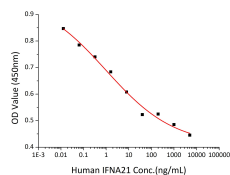
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Validation Data



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 ED₅₀ for this effect is 0.50~1.98 ng/mL, corresponding to a specific activity of 5.05×10⁵~2.00×10⁶ units/mg.