

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.

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 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.

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.

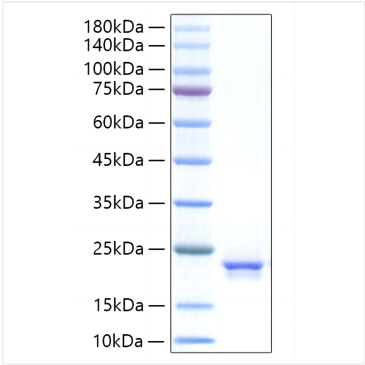
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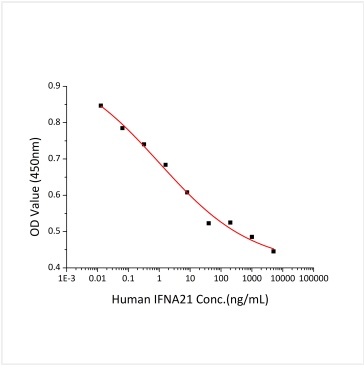
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Validation Data



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.