Recombinant Human IFN-alpha H2/IFNA14 Protein

Catalog No.: RP01897 Recombinant

Sequence Information

| Species | Gene ID | Swiss Pro |
|---------|---------|-----------|
| Human | 3448 | P01570 |

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Tags C-His

Synonyms

Interferon alpha-14; IFN-alpha-14; Interferon alpha-H; LeIF H; Interferon lambda-2-H□IFNA14

Product Information

| Source | Purification |
|--------------|---------------|
| HEK293 cells | > 95% by SDS- |
| | PAGE. |

| Calculated MW | Observed MW |
|---------------|-------------|
| 20.55 kDa | 20-30 kDa |

Endotoxin

 ${<}0.01EU/\mu g$ 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 stablizer (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, antiproliferative 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. The extracellular domain (ECD) of mature human IFNA14, shares 58% aa sequence identity with mouse IFNA14. 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, and IFNA14 has been shown to be a strong inducer of IFN-stimulated genes and anti-viral protection . IFNA14 has been shown to be potent against HIV-1 by up[]regulating the transcription of two intrinsic restriction factors with well-established anti-HIV-1 activity, MX2 and tetherin.

Basic Information

Description

Recombinant Human IFN-alpha H2/IFNA14 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Cys24-Asp189) of Human IFN-alpha H2/IFNA14 (Accession #NP_002163.2) fused with a His tag at the C-terminus.

Bio-Activity

Measured in a cell cytotoxicity assay using TF-1 cells. The ED_{50} for this effect is 0.47-1.88 ng/mL, corresponding to a specific activity of $5.32 \times 10^5 \sim 2.13 \times 10^6$ 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.





Recombinant Human IFN-alpha H2/IFNA14 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 20-30 kDa.



Recombinant Human IFN-alpha H2/IFNA14 was measured in a cell cytotoxicity assay using TF-1 cells. The ED₅₀ for this effect is 0.47-1.88 ng/mL, corresponding to a specific activity of $5.32 \times 10^5 \sim 2.13 \times 10^6$ units/mg.