Cynomolgus IFNA4 / IFNα4 / Interferon alpha-4 Protein (Fc Tag)

Catalog Number: 90134-C05H

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Biological Solution Specialist

General Information

Gene Name Synonym:

IFNA4

Protein Construction:

A DNA sequence encoding the cynomolgus IFNA4 (Met1-Asn189) was expressed with Fc region of mouse IgG at the C-terminus.

Source: Cynomolgus

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio-Activity

Measured in antiviral assays using WISH human amnion cells infected with vesicular stomatitisvirus (VSV).
The ED50 for this effect is 0.03-0.3 ng/mL.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Cys 24

Molecular Mass:

The recombinant cynomolgus IFNA4 is a disulfide-linked homodimer. The reduced monomer comprises 400 amino acids and has a calculated molecular mass of 45.6 KDa.The apparent molecular mass of the protein is approximately 48 KDa respectively in SDS-PAGE.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

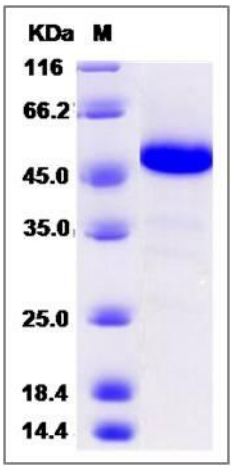
Usage Guide

Storage:

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Interferons (IFNs) are natural glycoproteins belonging to the cytokine superfamily, and are produced by a wide variety of cells types in response to challenges by foreign agents such as viruses, parasites and tumor cells. There are three major classes of IFNs according to the receptor type through which they signal, and the type I IFNs bind to a specific receptor complex known as the IFN-α receptor (IFNAR) consisting of IFNAR1 and IFNAR2 chains. The type I IFNs present in humans are IFN-α, IFN-β and IFN-ω, and the IFN-α come in 13 subtypes whose encoding genes locate in a cluster on chromosome 9. IFN-α is produced by leukocytes and mainly involved in innate immune response against viral infection together with other IFNs. IFN-α is produced in response to the presence of dsRNA, a key indicator of viral infection via Toll Like Receptors, and assists the immune response by inhibiting viral replication within host cells, activating natural killer cells and macrophages, increasing antigen presentation to lymphocytes, and inducing the resistance of host cells to viral infection. IFN-α also acts as a pyrogenic factor and thus causes fever by binding to opioid receptors and eliciting the release of prostaglandin-E2, and serves as an analgesic by employing the similar mechanism. Furthermore, IFN-α is suggested to promote apoptosis and accordingly has therapeutic effect against certain cancers by inducing increased production of the p53 gene product. Here, the IFN-α4a is an isoform of the human IFNA4 subtype.

References

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3. Takaoka A. et al., 2003, Nature. 424: 516-23.
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7. Hussain M. et al., 1997, J Interferon Cytokine Res. 17: 559-66.