

Rat IFN-alpha / IFNA1 / IFN Protein (His Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 80174-R08H

General Information

Gene Name Synonym:

IFNA1

Protein Construction:

A DNA sequence encoding the rat IFNA1 (P05011) (Met1-Ser192) was expressed, fused with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 99 % as determined by SDS-PAGE

Bio Activity:

Measured in antiviral assay using L929 cells infected with vesicular stomatitisvirus (VSV). The ED₅₀ for this effect is typically 4-20 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 °C

Predicted N terminal: Cys 24

Molecular Mass:

The recombinant rat IFNA1 comprises 180 amino acids and predicts a molecular mass of 20.9 kDa. The apparent molecular mass of the rat IFNA1 is approximately 20-25 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 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:

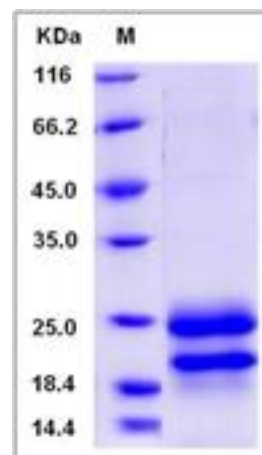
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

IFNA1, also known as IFN-alpha and IFNA, belongs to the alpha/beta interferon family. Interferons (IFNs) are proteins made and released by host cells in response to the presence of pathogens such as viruses, bacteria, parasites or tumor cells. They belong to the large class of glycoproteins known as cytokines. IFNs stimulate the production of two enzymes: a protein kinase and an oligoadenylate synthetase. They allow for communication between cells to trigger the protective defenses of the immune system that eradicate pathogens or tumors. IFNs can activate immune cells, such as natural killer cells and macrophages; they increase recognition of infection or tumor cells by up-regulating antigen presentation to T lymphocytes; and they also increase the ability of uninfected host cells to resist new infection by virus. Leukocyte interferon is produced predominantly by B lymphocytes. Immune interferon is produced by mitogen- or antigen-stimulated T lymphocytes. IFNA1 is produced by macrophages and has antiviral activities.

References

1. Takayama I, *et al.* (2012) The nucleocapsid protein of measles virus blocks host interferon response. *Virology*. 424(1):45-55.
2. Vairo D, *et al.* (2011) Severe impairment of IFN- α and IFN- β responses in cells of a patient with a novel STAT1 splicing mutation. *Blood*. 118(7):1806-17.
3. Bhattacharya S, *et al.* (2011) Bcr-abl signals to desensitize chronic myeloid leukemia cells to IFN- γ via accelerating the degradation of its receptor. *Blood*. 118(15):4179-87.

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