

# Mouse IFNG / Interferon Gamma Protein

Catalog Number: 50709-MNAH



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

Ifg; IFN- $\gamma$

### Protein Construction:

A DNA sequence encoding the mouse IFNG (NP\_032363.1) (Met1-Cys155) was expressed and purified.

**Source:** Mouse

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 85 % as determined by SDS-PAGE

### Bio Activity:

**1. Measured by its binding ability in a functional ELISA. Immobilized Mouse Interferon Gamma (Cat:50709-MNAH) at 2  $\mu$ g/ml (100  $\mu$ l/well) can bind Mouse IFNGR1 hFc (Cat:50705-M02H), the EC<sub>50</sub> of Mouse IFNGR1 hFc is 7.0-30.0 ng/mL. 2. Measured in antiviral assays using L929 cells infected with vesicular stomatitisvirus (VSV). The ED<sub>50</sub> for this effect is 0.05-0.3 ng/mL.**

### Endotoxin:

< 1.0 EU per  $\mu$ g of the protein as determined by the LAL method

**Predicted N terminal:** His 23

### Molecular Mass:

The recombinant mouse IFNG consists of 133 amino acids and predicts a molecular mass of 15.5 kDa. As a result of different glycosylation, it migrates as approximately 19.6 and 15.4 kDa band in SDS-PAGE under reducing conditions.

### 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

### Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

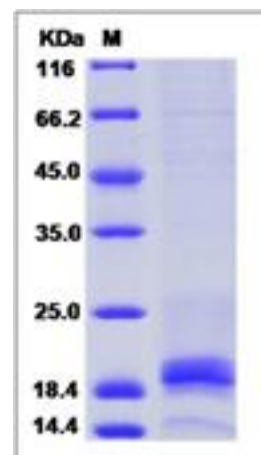
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

IFN gamma, also known as IFNG, is a secreted protein that belongs to the type II interferon family. IFN gamma is produced predominantly by natural killer and natural killer T cells as part of the innate immune response, and by CD4 and CD8 cytotoxic T lymphocyte effector T cells once antigen-specific immunity develops. IFN gamma has antiviral, immunoregulatory, and anti-tumor properties. IFNG, in addition to having antiviral activity, has important immunoregulatory functions, it is a potent activator of macrophages and has antiproliferative effects on transformed cells and it can potentiate the antiviral and antitumor effects of the type I interferons. The IFNG monomer consists of a core of six  $\alpha$ -helices and an extended unfolded sequence in the C-terminal region. IFN gamma is critical for innate and adaptive immunity against viral and intracellular bacterial infections and tumor control. Aberrant IFN gamma expression is associated with some autoinflammatory and autoimmune diseases. The importance of IFN gamma in the immune system stems in part from its ability to inhibit viral replication directly, and most importantly from its immunostimulatory and immunomodulatory effects. IFNG also promotes NK cell activity.

## References

1. Gray P W, *et al.* (1982) Structure of the human immune interferon gene. *Nature*. 298: 859-63.
2. Taya Y, *et al.* (1982) Cloning and structure of the human immune interferon-gamma chromosomal gene. *EMBO J*. 1: 953-8.
3. Goshima N, *et al.* (2008) Human protein factory for converting the transcriptome into an in vitro-expressed proteome. *Nomura N Nat Methods*. 5: 1011-7.