

# Recombinant Human IFN-gamma Protein

Catalog No.: RP01038    Recombinant    9 Publications

## Sequence Information

**Species**    **Gene ID**    **Swiss Prot**  
 Human        3458        P01579-1

**Tags**

No tag

**Synonyms**

IFNG;IFG;IFI

## Background

Interferon-gamma (IFN-gamma) is a secreted protein which belongs to the type II interferon family. Recombinant Human IFN-gamma is a 16.8 kDa protein containing 143 amino acid residues. IFN-gamma is produced by a variety of immune cells under inflammatory conditions, notably by T cells and NK cells. IFN-gamma, in addition to having antiviral activity, has important immunoregulatory functions. Interferon-gamma is a central regulator of the immune response and signals via the Janus Activated Kinase (JAK)-Signal Transducer and Activator of Transcription (STAT) pathway.

## Basic Information

### Description

Recombinant Human IFN-gamma Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Gln24-Gln166) of human Interferon Gamma (Accession #NP\_000610.2).

### Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Human FNGR1/CD119 at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Human IFNG with a linear range of 0.98-1.97 ng/mL. |2. Measured in a cytotoxicity assay using HT-29 cells. The ED<sub>50</sub> for this effect is 0.74-2.96 ng/mL, corresponding to a specific activity of  $3.38 \times 10^5$ ~ $1.35 \times 10^6$  units/mg. |3. Flow cytometry: 1X10<sup>6</sup> A549 cells treated with IFN- $\gamma$  (RP01038, 1 ng/mL) were surface-stained with PE Rabbit IgG isotype control (A24172, 5  $\mu$ L/Test, left) or PE Rabbit anti-Human PD-L1/CD274 mAb (A26692, 5  $\mu$ L/Test, right). |4. Flow cytometry: 1X10<sup>6</sup> NCI-H460 cells treated with IFN- $\gamma$  (RP01038, 1 ng/mL) were surface-stained with PE Rabbit IgG isotype control (A24172, 5  $\mu$ L/Test, left) or PE Rabbit anti-Human PD-L1/CD274 mAb (A26692, 5  $\mu$ L/Test, right)

### Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

### 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.

### Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

## Product Information

**Source**

*E. coli*  
 ≥ 95 % as determined by SDS-PAGE; ≥ 95 % as determined by HPLC.

**Calculated MW**    **Observed MW**

16.78 kDa        17 kDa

**Endotoxin**

< 0.1 EU/ $\mu$ g of the protein by LAL method.

**Formulation**

Lyophilized from a 0.22  $\mu$ m filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

**Reconstitution**

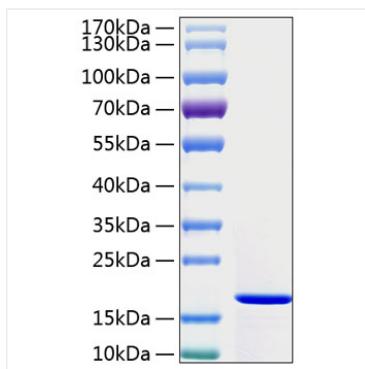
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

## Contact

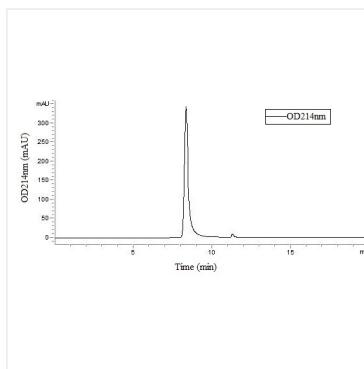
400-999-6126  
 cn.market@abclonal.com.cn



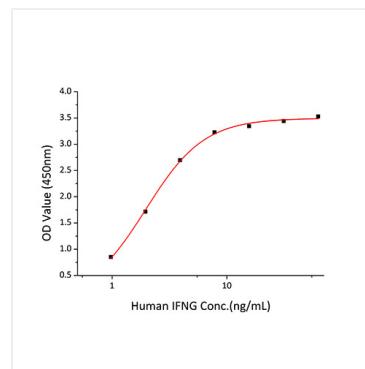
## Validation Data



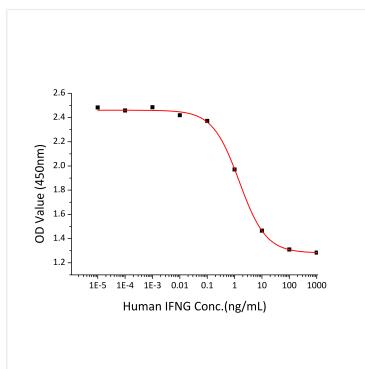
Recombinant Human IFN-gamma Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



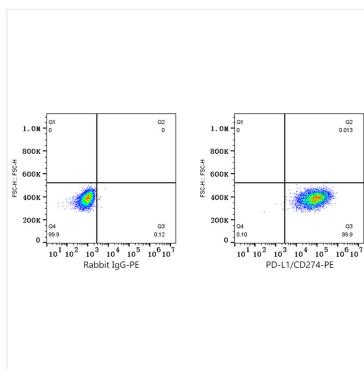
The purity of Recombinant Human IFN-gamma Protein is greater than 95% as determined by SEC-HPLC.



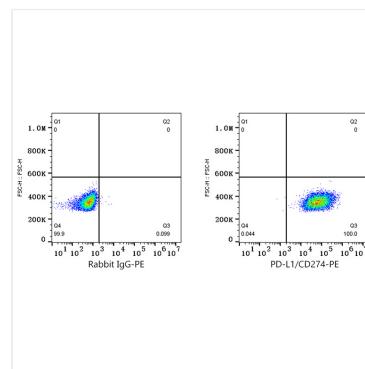
Immobilized Human FNGR1/CD119 at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Human IFNG with a linear range of 0.98-1.97ng/mL.



Recombinant Human IFN-gamma induces cytotoxicity in the HT-29 cells. The  $ED_{50}$  for this effect is 0.74-2.96 ng/mL, corresponding to a specific activity of  $3.38 \times 10^5 \sim 1.35 \times 10^6$  units/mg.



Flow cytometry:  $1 \times 10^6$  A549 cells treated with IFN- $\gamma$  (RP01038, 1 ng/mL) were surface-stained with PE Rabbit IgG isotype control (A24172, 5  $\mu$ L/Test, left) or PE Rabbit anti-Human PD-L1/CD274 mAb (A26692, 5  $\mu$ L/Test, right)



Flow cytometry:  $1 \times 10^6$  NCI-H460 cells treated with IFN- $\gamma$  (RP01038, 1 ng/mL) were surface-stained with PE Rabbit IgG isotype control (A24172, 5  $\mu$ L/Test, left) or PE Rabbit anti-Human PD-L1/CD274 mAb (A26692, 5  $\mu$ L/Test, right)