

# Active Recombinant Human IFN-gamma Protein

Catalog No.: RP01038 **Recombinant** **1 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

### Product Information

Source	Purification
<i>E. coli</i>	> 95% by SDS-PAGE.

### Endotoxin

< 0.1 EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm 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.

### Description

Recombinant Human Interferon 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

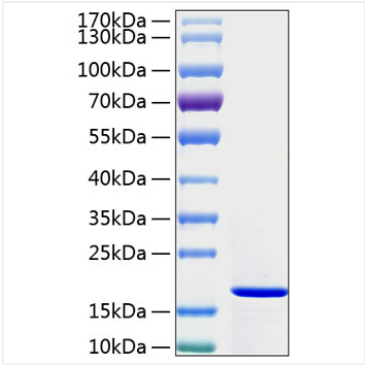
1. Measured by its binding ability in a functional ELISA. Immobilized Human FNGR1/CD119 at 1 μg/mL (100 μL/well) can bind Human IFNG with a linear range of 0.98-1.97 ng/mL. 2. Measured in a cytotoxicity assay using HT-29 cells. The ED<sub>50</sub> for this effect is 1.6-7.4 ng/mL, corresponding to a specific activity of 1.35×10<sup>5</sup>~6.25×10<sup>5</sup> units/mg.

### Storage

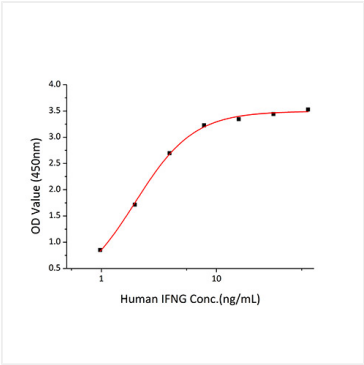
Store the lyophilized protein at -20°C to -80 °C for long term. After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week. Avoid repeated freeze/thaw cycles.

## Contact

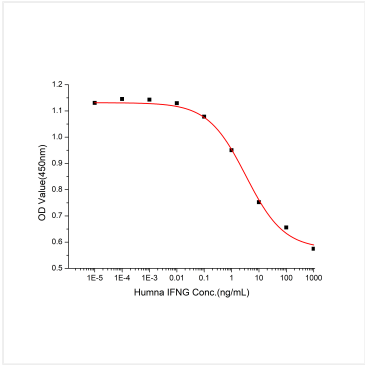
Validation Data



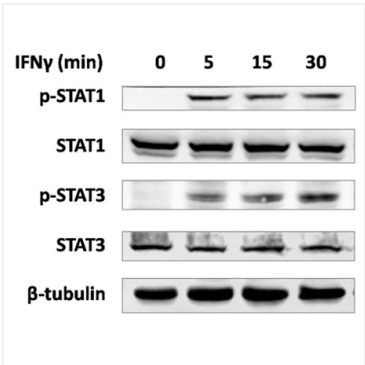
Recombinant Human Interferon Gamma Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 17 kDa.



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<sub>50</sub> for this effect is 1.6-7.4 ng/mL, corresponding to a specific activity of 1.35 $\times$ 10<sup>5</sup>~6.25 $\times$ 10<sup>5</sup> units/mg.



Recombinant human IFN- $\gamma$  (10 ng/mL) was used to treat HCT116 cells. Western-blot result showed that both the level of phosphorylated STAT1 and STAT3 were increased, indicating the stimulation was successful.(Customer Feedback Data)