

# Recombinant human IFN- $\gamma$

*E. coli* expressed human interferon gamma with HSA

Cat. code: rcyec-hifng, rcyec-hifng-5

<https://www.invivogen.com/human-ifng>

For research use only

Version 25A17-MM

## PRODUCT INFORMATION

### Contents

Recombinant human IFN- $\gamma$  is provided as a lyophilized powder and is available in two quantities:

- rcyec-hifng: 20  $\mu$ g
- rcyec-hifng-5: 100  $\mu$ g (5 x 20  $\mu$ g)

*Note:* This product is sterile filtered prior to lyophilization.

- 1.5 ml endotoxin-free water for rcyec-hifng and rcyec-hifng-5

### Storage and stability

Recombinant human IFN- $\gamma$  is shipped at room temperature. Upon receipt, it should be immediately stored at -20 °C.

- Upon resuspension, prepare aliquots of recombinant human IFN- $\gamma$  and store at 4 °C for 1 week or at -20 °C to -80 °C for 12 months.

*Note:* Avoid repeated freeze-thaw cycles.

### Quality control

- Purity:  $\geq$  95% (SDS-PAGE)
- Endotoxin level:  $\leq$  0.1 EU/ $\mu$ g (LAL assay)
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.
- The biological activity of IFN- $\gamma$  is confirmed using HEK-Blue™ IFN- $\gamma$  cells.

### Characteristics

- Alternate name: Type II IFN, Immune interferon
- Source: Bacterial; *Escherichia coli* (*E. coli*)
- Carrier: HSA (human serum albumin)
- Tag: Tag-free
- Accession number: P01579
- Molecular mass: ~ 17 kDa (SDS-PAGE)
- Formulation: Recombinant human IFN- $\gamma$  was lyophilized from a 0.2  $\mu$ m filtered phosphate buffer saline (pH 7.4), 5% saccharose, 2% HSA.
- Solubility: 100  $\mu$ g/ml in water

## APPLICATIONS

- Cellular assays

## PRODUCT DESCRIPTION

Interferon gamma (IFN- $\gamma$ ), also known as Type II IFN or immune interferon, is predominantly produced by innate immune cells, such as Natural Killer (NK) cells and innate lymphoid type 1 cells (ILC1), and activated adaptive immune cells, such as Th1 CD4+ T cells and cytotoxic CD8+ T cells<sup>1</sup>. This cytokine is produced as a secreted homodimeric molecule in response to infections and growing tumors<sup>1,2</sup>. Recombinant human IFN- $\gamma$  is a high-quality and biologically active cytokine, validated using proprietary IFN- $\gamma$  reporter cells. This cytokine also known as type II interferon is produced in *E. coli* and thoroughly purified to remove endotoxins.

Recombinant human IFN- $\gamma$  can be used together with HEK-Blue™ IFN- $\gamma$  cells for the screening of inhibitory molecules, such as Emapalumab, a monoclonal antibody that targets IFN- $\gamma$  and prevents its binding to its receptor.

1. Ivashkiv L.B., 2018. IFN $\gamma$ : signalling, epigenetics and roles in immunity, metabolism, disease and cancer immunotherapy. *Nat Rev Immunol.* 18(9):545-558.
2. Mendoza, J.L. et al., 2019. Structure of the IFN $\gamma$  receptor complex guides design of biased agonists. *Nature.* 567(7746):56-60.

## METHODS

### Preparation of stock solution (100 $\mu$ g/ml):

1. Add 200  $\mu$ l of endotoxin-free water (provided) to 20  $\mu$ g of recombinant human IFN- $\gamma$ .
2. Mix gently by pipetting until completely resuspended.
3. Use immediately or prepare aliquots and store at -20 °C or -80 °C. Avoid freeze-thaw cycles.
4. Further dilutions can be prepared in the appropriate aqueous buffer, such as cell culture medium containing serum.

## RELATED PRODUCTS

Product	Catalog Code
Anti-hIFN- $\gamma$ -IgA2	hifng-mab7-2
HEK-Blue™ IFN- $\gamma$ Cells	hkb-ifng

## TECHNICAL SUPPORT

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