

## DATASHEET

Version 20181206

# IFN- $\gamma$ , Human

**Cat. No.:** Z02915-100

**Size:** 100.0 ug

**Synonyms:** Immune Interferon, type II interferon, T cell interferon, MAF, IFNG, IFG, IFI, IFN-gamma.

### Description:

Human Interferon gamma (hIFN- $\gamma$ ) is a macrophage-activating factor and the lone member of Interferon type II. The active form of IFN- $\gamma$  is an antiparallel dimer that interacts with the receptor IFN- $\gamma$ R1 and sets off IFN- $\gamma$ /JAK/STAT pathway. IFN- $\gamma$  signaling does diverse biological functions primarily related to host defense and immune regulation, including antiviral and antibacterial defense, apoptosis, inflammation, and innate and acquired immunity. While IFN- $\gamma$ -induced inflammatory cascade summons a variety of immune-related cell types, such as macrophages, natural killer (NK) cells and cytotoxic T lymphocytes (CTLs), IFN- $\gamma$  is also implicated in resistance to NK cell and CTL responses and in immune escape in a variety of cancers.

Recombinant human Interferon gamma (rhIFN- $\gamma$ ) produced in *E. coli* is a non-glycosylated polypeptide chain of 144 amino acids. A fully biologically active molecule, rhIFN- $\gamma$  has a molecular mass of 17 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary refolding and chromatographic techniques at GenScript.

### Amino Acid Sequence:

```
00001 MQDPYVKEAE NLKKYFNAGH SDVADNGTLF LGILKNWKEE
00041 SDRKIMQSQI VSFYFKLFKN FKDDQSIQKS VETIKEDMNV
00081 KFFNSNKKKR DDFEKLTYNS VTDLNVQRKA IHELIQVMAE
00121 LSPAAGTKGR KRSQMLFRGR RASQ
```

**Source:** *E. coli*

**Species:** Human

**Biological Activity:** ED<sub>50</sub> < 0.05 ng/ml, measured by cytotoxicity assay using HT-29 cells.

**Molecular Weight:** 17 kDa, observed by reducing SDS-PAGE.

**Sequence Analysis:** Gln<sup>24</sup>-Gln<sup>166</sup> (accession number: P01579). Expression construct with an N-terminal Met.

**Formulation:** Lyophilized after extensive dialysis against PBS.

**Reconstitution:** Reconstituted in ddH<sub>2</sub>O or PBS at 100  $\mu$ g/ml.

**Purity:** > 95% as analyzed by reducing SDS-PAGE.

**Endotoxin Level:** < 1 EU/ $\mu$ g, determined by LAL

**Storage:** Lyophilized recombinant human Interferon gamma (rhIFN- $\gamma$ ) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhIFN- $\gamma$  should be stable up to 1 week at 4°C or up to 2 months at -20°C.