

## IFN- $\gamma$ , Rat

**Cat. No.:** Z03274-10

**Size:** 10.0 ug

**Synonyms:** Type II interferon, T cell interferon, MAF

### Description:

Interferon gamma (IFN- $\gamma$ ), also known as Type II interferon, is a cytokine produced primarily by T-lymphocytes and natural killer cells. The active form of IFN- $\gamma$  is an antiparallel dimer that interacts with the receptor IFN- $\gamma$ R1 and activates the IFN- $\gamma$ /JAK/STAT pathway. IFN- $\gamma$  signaling promotes biological functions primarily related to antiviral and antibacterial defense, apoptosis, inflammation, and regulation of innate and acquired immune responses. While IFN- $\gamma$ -induced inflammatory cascades summon 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 Rat Interferon gamma (IFN- $\gamma$ ) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 134 amino acids. A fully biologically active molecule, rIFN- $\gamma$  has a molecular mass of 15.5 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

### Amino Acid Sequence:

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00001 GTLIESLESL KNYFNSSSMD AMEGKSLLLD IWRNWQKDG  
00041 TKILESQIIS FYLRLEVLK DNQAISNNIS VIESHLITNF  
00081 FSNSKAKKDA FMSTAKFEVN NPQIQHKAVN ELIRVIHQLS  
00121 PESSLRKRKR SRC
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**Source:** *E. coli*

**Species:** Rat

**Biological Activity:** ED<sub>50</sub> <0.5 ng/ml, measured by cytotoxicity assay using WEHI-279 cells, corresponding to a specific activity of >2×10<sup>6</sup> units/mg.

**Molecular Weight:** 15.5 kDa, observed by reducing SDS-PAGE.

**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 SDS-PAGE and HPLC.

**Endotoxin Level:** < 0.2 EU/ $\mu$ g, determined by LAL method.

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